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AMERICAN ELK.



FRANK FORESTER'S  
**F I E L D   S P O R T S**

OF THE  
**UNITED STATES,**

AND  
**BRITISH PROVINCES, OF NORTH AMERICA.**

There is exhilaration in the chase —  
Not bodily only, \* \* \* \* \*

It is a mingledapture, and we find  
The bodily spirit ascending to the mind,  
*for Equestrian Stridings*

BY  
**HENRY WILLIAM HERBERT,**  
AUTHOR OF "MY SHOOTING BOX," "THE FARMACEUTICALS,"  
"MARMADUCE WYVIL," "GRIMWELL," "THE BROTHERS,"  
"THE ROMAN TRAITOR," &c., &c.

IN TWO VOLUMES.  
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# FIELD SPORTS

OF THE

UNITED STATES AND BRITISH PROVINCES.

## BAY SHOOTING.



THE Atlantic coasts of the United States, with the deep bays and indentures of their shores, the estuaries of their noble rivers, the wide extent of salt marshes and meadows, interspersed with shallow land-locked washes and lagoons, abound, perhaps, more than any other region of the world, in which man and cultivation cease, with all the various tribes of water-fowl and waters, which can minister to the amusement of the sportsman. From the magnificent and stately Swan, down to the minute Sandpiper, every species of aquatic birds abound in their appropriate haunts, and in their peculiar season.

From Boston bay to the Balize, some portion of the coast will, at all times of the year, be found to swarm with all the



varieties of Curlew, Sandpiper, Plover, Gullwit, or Phalarope, sometimes as passing visitors, sometimes as denizens and owners of the soil, on which they breed their nests, and rear their amphibious young.

The greater portion of these migrate on the shores of the Southern States, and many in countries yet to the south of these, and during the spring and summer, pass eastward and northward along the coast of the Atlantic, to some breeding places in the extreme North, on the cold shores of Labrador, returning thence in autumn to the milder climates of Florida, and the warm waters of the Gulf of Mexico.

The great tract of shallow, land-locked water, which lies along almost the whole southern side of Long Island, improperly called the Great South Bay, for it is rather a lagoon than a bay, "occupying a distance of seventy miles without interrupted inland navigation," bounded on the south by the shingle beach and sand hills, which divide it from the open Atlantic, and on the north by the vast range of salt meadows which form the margin of the island, is the resort of countless flocks of aquatic fowl of every description, and is especially the paradise of gunners. The marshy shores of South-western Jersey, the broad embouchure of the Delaware, the many beautiful streams which flow together into the Bay of the Chesapeake, the salted Albemarle and Pamlico Sounds, the rapid waters of Florida, the great bay of Mobile, and the swamps, Bayou, and Pontchartrain, at the mouth of the Mississippi, all abound in their season with these aquatic myriads, but, as some, perchance, are they more systematically and regularly pursued, than in the waters of Long Island. The mode of pursuing and taking them, is nearly the same everywhere, as they, like all species of wild fowl, must be taken by stratagem, and from ambush, not by open pursuit.

The tribes and varieties of these birds are so numerous, that to attempt a detailed account or description of them all, would far exceed the possible limits of such a work as this, and would cause it to assume the character, to which it does not aspire, of



a regular ornithology, rather than a guide and companion of the sportsman.

Of the Rallidae, or Rail family, there are nine varieties; of the Charadriidae, or Plover family, there are also nine; of the Scolopacidae, or Snipe family, including Sandpipers, Tattlers, Godwits, Snipe, Avocet, Scaup, and Curlew, there are no less than twenty-eight; and of the family of Pinnatipedes, or Long-footed Swimming Birds, there are three varieties, besides six Geese, two Swans, sixteen Scaubucks, and four Divers, all of which come, to a certain degree, within the definition of game, as being objects of pursuit to the sportsman, both for the pleasure of the chase, and for the purposes of the table; and in addition to these, there are seventeen members of the family of Graculæ, including Cranes, Herons, Bitterns, and Ibises, which are generally shot by the sportsman, when he finds an opportunity, although they cannot be in any sort regarded as game, and are not, in general, suitable for food, their flesh being, for the most part, coarse, dark, and fishy. A certain number of these birds, however, must be dealt with and regarded as game; I begin, therefore, this department of my work, with what are commonly called, although only one of them correctly,

## BAY SNIFE.

No. 1. RED-BREASTED SANDPIPER—*Tringa Islandica*; Linn.—*Volga, the Robin Snipe.*

Ash-colored Sandpiper, *Tringa canina*, Wils. Winter -Red-breasted Sandpiper, *Tringa rubra*, Wils. Spring -*Tringa islandica*, Bonap. Syn.—*Tringa canina*, Sw. & Bech. Known as Ash-colored Sandpiper, Nutt. Man.—Kent or Ash-colored Sandpiper, *Tringa islandica*, Aud.

" *Specific Character*.—Bill straight, longer than the head; tarsi one inch and three-sixteenths long; rump and upper tail coverts white, barred with dark brown; region of the vent and the lower tail coverts white, with dusky markings. In spring, the



upper parts are ash-gray, variegated with black and pale yellowish-red, lower parts, including the throat and breast, brownish-orange. In autumn, the upper parts are ash-gray, margined with dull white, rump, and upper tail coverts, barred with black and white, lower parts white, throat and breast marked with dusky, a dull white line over the eye. Adult in spring—tail black, a broad band of reddish-brown commencing at the base of the upper mandible, extends half way to the eye, where it changes to reddish-brown, upper part of head and the hind neck dusky, the feathers margined with grayish white; a few touches of pale reddish-brown on the latter, throat, breast, neck, breast, and abdomen, reddish-brown, vent white, lower tail coverts white, spotted with dusky, upper plumage blackish-brown, upper tail coverts barred with black and white, tail pale brown, margined with white, primary coverts black, tipped with white, secondary coverts grayish-brown, margined with white. Young with the upper parts grayish-brown the feathers with central dusky streaks, a narrow line of cinnamon, color toward their margins, which are dull white, the lower parts ash-gray. Length of adult, ten inches, wing six and three-quarters.

"This species is familiar to our gunners by the name of *Rotun Snipe*. In the great South Bay, Long Island where this immense salt marshes are separated by creeks and channels, a number of beautiful ponds appear at low tide, each with a name, each having its appropriate name, this Long Island, an interesting feature in the geography of the area. One of the Red-breasted *S. adspersa*, during its brief stay in the spring, takes up its abode. Shortly after daylight, it commences daily labor in search of food, visiting the shoal ponds that abound with small shell fish, on which they chiefly subsist. The wry gunner, eager to profit by the ready sale of this superior bird, makes early preparation to receive them, lying concealed near their favorite haunts, by imitating their peculiar note, he thus their ranks by bringing them within reach of his well-directed gun.

"At the period for migrating, this species assemble in flocks,



and steer for the North, where it passes the season of reproduction; about the middle of August it returns with its young, when the change of plumage is quite visible—the abdomen at this time is white, the breast pale rufous. Late in September it moves southward, at this period the lower plumage is white, spotted on the neck, breast and flanks with dusky; the upper plumage ash-gray; in this dress it is the ‘White Robin Snipe’ of our gunners.

“In the autumn it generally frequents the inner beach, and is sometimes observed along the surf, collecting minute marine productions that are cast on the shore by the waves. In the fall it is more timid than it is in the spring, frequently passing within hearing of the fender’s treacherous whistle, without approaching headlong. In the spring its lower plumage resembles the Red-breasted Thrush, or Robin—*Turdus migratorius*—from which it receives its name. Common to both continents, and is said to lay four eggs.”

No. 2. Red-backed Sandpiper—*Tringa Alpina*; Linn.—  
*Volgo, Black-breasted Plover.*

*Tringa alpina*, Red-backed Sandpiper, Wils. *Tringa alpina*, Bonap. Syn.  
*Tringa alpina*, American Ducks, Os. & Kerr. Ducks or Oiled, Nall.  
\* Man. Red-backed Sandpiper, *Tringa Alpina*, Aud.

“*Specific Character*.—Bill about one-third longer than the head, bent toward the end; length of tarsi one inch. Adult with the bill black, one-third longer than the head, slightly bent toward the end, and rather shorter than that of *T. Sabirogata*; upper part of the head, back and scapulars chestnut-red, the centre of each feather black, which color occupies a large portion of the scapulars; wing coverts and quills grayish-brown; the bases and tips of the secondaries, and part of the outer webs of the middle primaries, white; forehead, sides of the head, and hind-neck, pale reddish-gray, streaked with dusky; fore-neck and upper part of breast, grayish-white, streaked with dusky; on the lower part of the breast a large black patch; abdomen



white, lower tail coverts white, marked with dusky, tail light brownish-gray, streaked—the central feathers darker.

" Winter dress, upper parts brownish-gray, throat grayish-white, fore part and sides of neck, sides of the face, and sides of the body, pale brownish-gray, faintly streaked near darker, rest of the lower parts white. Length seven inches and a half; wing four and an eighth.

" This bird, more familiar to our gunners by the name of 'Black-breast,' arrives on the shores of Long Island in the month of April. It soon passes on to the north, and is said to breed in the Arctic regions. In the month of September it returns, and at that season is quite abundant, though not so plentiful with us as it is on the coast of New Jersey. It associates in flocks, and frequents the shores, sand bars and muddy flats, feeding on worms and minute shell fish, which abound in such places. In the month of October it is usually very fat, and is considered excellent eating. In autumn, the plumage is quite entirely different from that of spring, but by gunners generally it is considered a distinct species, and is called by them at that season 'Winter Snipe.' It then resembles the last named dress of the Golden Sandpiper, the form and length of their bills being not unlike. By persons not accustomed to comparing birds, the two species might easily be confounded. The neck of the latter is longer and more slender—the head smaller and more rounded—the wings and legs longer—and with its general superiority in size, is sufficient to determine the species.

" The Red backed Sandpiper is found during autumn on the sandy and muddy shores along the whole extent of the coast of the United States. It is a restless, active bird, and glean its food with great sameness, and seems to be tired of continually changing its position. Soon after alighting, they collect together, and make a short excursion over the water, again alighting a short distance from where they had previously taken wing. During their aerial excursions, when whirling about, they crowd so close together, that many are killed at a single shot. On one of these occasions, Mr. Brasher informs me that he killed fifty.



two, by discharging both barrels into a flock. This number is greater than I ever before heard of, but from ten to fifteen is not unusual.

"To the curious who are fond of speculating on anomalies, I will mention a coincidence connected with an individual of this species, that I am at a loss to account for. In the month of November, 1840, a gentleman shot a Red-backed Sandpiper. Not recognizing it in its winter dress, and supposing it to be something unusual, he had the politeness to forward it to my address. It being a very common species, and having in my cabinet several duplicates in both spring and winter plumage, I did not think it worth preserving. I threw it carelessly on my table, where it remained for two or three weeks without receiving further notice. At the expiration of that time, my attention was again called to it, when I was somewhat surprised to find it in as good condition as when I had first received it. It having been shot about three weeks, and during the time that it was in my possession kept in a room in which almost every day there was a fire, I decided, as a matter of curiosity, to keep it in order to ascertain how long it would remain before decomposition would take place. On several subsequent examinations, I found no symptoms of decay, but discovered that the breast and other fleshy parts began to shrink. Now at the expiration of two years, it is perfectly dry and hard—the eyes sunk in, or entirely dried up, a large portion of the breastbone bare, the abdomen much contracted, and at the same time all the feathers are complete, in other words, it is a self-preserved mummy. The entrails were not removed, neither was it injected, nor antiseptic means of any kind resorted to. Had this occurred with an upland bird, especially when in poor condition, I should not have thought it strange: but the shore birds, from their being so excessively oily, are proverbial for spoiling soon after shooting."



No. 3. PECTORAL SANDPITCH.—*Tringa Pectoralis*; Bonap.—  
*Fulgo, Meadow Snipe.*

*Tringa pectoralis*, Bonap. Syn. *Pectoral Sandpiper*, *Tringa pectoralis*, Nutt.  
Mass. *Pectoral Sandpiper*, *Tringapectoralis*, Aud. Orn. Belg.

"*Specific Character*—Bill straight, horn orange-green, length of tarsus one inch and one-sixteenth; upper parts brownish black edged with reddish brown, throat white, fore part of neck and upper part of the breast light brownish-gray, streaked with dusky; rest of lower parts including the lower tail coverts white. Adult with the bill straight; top of the head dark brown, intermixed with black, sides of the head, neck and a large portion of the breast, grayish brown, streaked with dusky; chin white, a streak of dark brown before the eye, continuing to the nostril—directly above a faint line of white. Back dark brown, feathers margined with white; primary quills dark brown—some of the first white, outer secondaries slightly edged with white, tail feathers brown, margined with brownish white—some middle feathers darker, longest and more pointed, lower part of the breast, abdomen, and sides of the body and under tail coverts white, feet dull yellow, tibia bare, about half the length. Female, the general plumage lighter. Length nine inches and a half; wing five and a quarter.

"During some seasons this species is quite plentiful on the shores of Long Island. It is generally overlooked by the gunners, and I find that most of our sportsmen are not aware of the claims it has to their attention.

"In the spring I have never met with it in large numbers, and from this circumstance I am inclined to the opinion that it passes on to its breeding grounds with but little delay. In the latter part of August it returns, and increased numbers appear on the necks of land in the immediate vicinity of tide water, and are also found in the islands in the bay. Although large numbers are sometimes seen occupying the same feeding grounds, still



there appears to be a great want of sociability among them—each one seemingly so intent on providing for its own comfort, as to be entirely regardless of those of its companions.

"When feeding, the flock scatter over the bare places that occur on the moist grounds which they inhabit; and when thus employed, are silent. They are by no means wary, and regard the approach of the gunner with indifference. On one occasion, I fell in with a large number, the nearest one of which I walked up to within close shooting distance, seemingly entirely unmolested. Notwithstanding there were upwards of forty in view, they were so widely distributed that I could not get two in a range, nor did I during my operations, which were continued until I had procured twenty-one of the number. At the report of my gun, those that were not singled out, flew on a short distance, and resumed their occupations as before; and during the repeated firing, I did not observe an individual pass beyond the measure which was composed in a few acres. When surprised, it springs up, presenting a fair mark; and, if allowed to proceed, flies steadily at a short distance above the surface of the ground.

"It feeds on various species of insects and minute shell-fish, which lie near the surface, and is at times seen looting with its bill to a greater depth. On dissection I have found in its stomach particles of plants. Its note, which is a low whistle, is not often repeated, except when apprehensive of danger.

"To some of the residents of the island, it is known by the name of 'Meadow Snipe,' and I have heard the bay-men term it 'Short-neck.' In autumn it is quite common at Egg Harbor, and sometimes remains there till the early part of November. Toward the latter part of the season it is in excellent flesh. On the coast of New Jersey it is called the 'Fat Bird.'

"Mr. Rand has informed me that it occurs in Pennsylvania, in which section it has received the appellation of 'Jack-Snipe.' I have occasionally seen it in our locality during the month of July, but in such instances it has been alone, and I have always at that period looked upon them as stragglers, who, for want of inclination or ability to perform the fatiguing journey, have lagged behind the migratory band.



"On Long Island I do not think it breeds, and I am not aware that their nests have been found on the southeast of the United States. In autumn its flesh is very good, and well flavoured; when prepared late in the season, I think it superior to any of our shore birds, and I have partaken of it when I have thought it equal to any of our upland game."

"The Long-legged Sandpiper, the Curlew Sandpiper, and the Semipalmated Sandpiper, I purposely omit, as I care that they must not be regarded by the sportsman as regular game. Wilson's Sandpiper and Solom's Sandpiper, I also omit on account of their rarity, small size, or worthlessness."

No. 4. YELLOW-SHOULDER TITLIE—*Totanus Flavipectus*, Latham.  
*Fulgo, the Yellow-Legs.*

*Scotopex flavipes*, Wils. Amer. Orn. *Totanus flavipes*, Falm. Sci. *Totanus flavipes*, Aud. Ornith. *Totanus flavipes*, Say. & Bach. *Arremonotus*, *Totanus flavipes*, Aud. Orn. Dig.

"*Species & Character*.—Bill along the ridge one inch and three-eighths; length of tarsus one inch and seven eighths; legs yellow. Adult with the bill black; throat white; upper part of the head, lores, cheeks, hind part and sides of the neck, deep brownish gray, streaked with grayish-white; eye encircled with white; a band of the same color from the tail to the eye; fore-neck, sides of the body, and upper part of the breast, grayish-white, streaked with grayish brown; lower part of the breast and abdomen white; lower tail coverts white, the outer feathers barred with brown; scapulars and fore part of the back, brown, the feathers barred and spotted with black and white; primaries blackish-brown, the shaft of the outer brownish-white, whiter toward the tip—the rest dark brown; secondaries margined with white; hind part of the back brownish gray; tail barred with grayish-brown, white at the tip; legs, feet, and toes yellow; claws black. Length ten inches and three quarters; wing six. Young with the legs greenish—and by those who have not recognized it as the young of the year, I have heard the propriety of its name questioned.



" This common species, well known throughout the Union, arrives on the shores of New Jersey and Long Island in the early part of May. It frequents marshes, and frequents the muddy flats if it are left bare at the recess of the tide. At high water, it resorts to the ponds on the bays and meadows, where it glows its back, consisting of small blue fish, worms, and insects. It is sometimes observed wading into the shallow water, in pursuit of small fishes.

" Gregarious in its habits, it is continually calling for others to unite with it, when a shrill cry informs the gammer of its approach. It makes the shrill cry, answers the gammer's whistle, and it then spatters— and concerted— sets its wings, and glides smoothly up to the decoy, gradually lowering itself as it goes— which when done, appears conspicuous beyond the tall feathers— and with doublets on the soft mud, or in the shallow water. It is somewhat than the Red-breasted Snipe, but like that species, when invited by the gammer's whistle, it is not unusual for it to return, and receive the second fire.

" The voice of the Yellow-shanks is shrill, and consists of three or more notes. When wounded in the wing, it runs fast, and hides among the grass, frequently so well concealing itself as to avoid detection. Its manners and customs are well known to our gammers, and it is met with by sportsmen on many streams in the interior. Although its flesh is not superior, it meets with ready sale in the New York markets, and large numbers are shot to supply the demand.

" A noted gammer residing in the vicinity of Bellport, informed me that he killed one hundred and six Yellow-shanks, by discharging both barrels of a gun into a flock while they were sitting close to the beach. This is a higher number than I should have set upon, had I been asked to venture an opinion on the probability of a very successful shot. Still, it is entitled to credit. Wilson speaks of eighty-five Red-breasted Snipe having been shot at one discharge of a musket. Mr. Audubon mentions that he was present when one hundred and twenty-seven were killed by discharging three barrels. Mr. Basher,







brown, spotted with white, and dusky; scapulars the same; tail brown, barred with white.

— Winter plumage, the upper parts lighter—large portion of the breast and abdomen white; sides of the body barred with dusky. Length fourteen inches, wing seven and a quarter.

— This species—with as not as numerous as the former—is known to the gunners by the name of Greater Yellow-shanks. It arrives on Long Island about two weeks earlier than the preceding, like which, its visit in the spring is of short duration. It has an attachment for the muddy shores of creeks and ponds, where it collects its food, and like many other species of shore birds, seems to have a fondness for the spawn of the knipstubb or "horse-fish." It goes to the north and returns in the latter part of August, and remains until cold weather. On the marshes, in the vicinity of Oyster Pond, I have shot them late in November. In autumn they get in fine condition, and their flesh is at that season well flavoured. They do not usually associate in large flocks, generally moving about in parties of from five to twelve. Its voice is much stronger than that of the former, and consists of fewer notes, which, by imagination, it obeys. It is more suspicious than the Lesser Yellow-shanks, though if the gunner lies close, it approaches the decoys without much hesitation.

— It walks over its feeding grounds with a graceful carriage, and collects its food in an elegant and easy manner. It is capable of rapid flight, and at times mounts high in the air, from which observations its loud, clear, and familiar notes are often heard.

— Its habits are similar to the preceding, to which it bears a great resemblance in markings. On the coast of New Jersey it is common, and I have been informed that a few breed there. On Long Island I can find no trace of its having been found breeding; and I have no recollection of meeting with it there during the month of June, or early part of July; in the latter part of the last named month I have met with it, but that period is unusually early, as it generally returns to us from the North, from two to three weeks later than the Lesser Yellow-shanks."



No. 6. SEMIPALMATED TATLER—*T. semipalmatus*,  
Lath.—*Fulgo, the Willet*.

Red pin winged snipe, Wils. *T. semipalmatus*, *semipalmatus*, Fulgo, No. & Key. Semipalmated Snipe, or Willet, Say. Semipalmated Snipe, or Willet, Aud.

*Species Character*.—Secondaries and basal part of the primaries white, toes connected at base by broad membrane. Adult with the head and neck brown, intermixed with greenish blue, breast and sides of the body spotted and barred with brown on white ground, abdomen white, tail covert white barred with brown, tail greenish brown, barred with darker brown, the outer two feathers lighter, rump brown, base part of the back and wing coverts brown, body spotted with dull white, primaries blackish brown, basally, tinged with white, secondaries white. Length fifteen inches, and a half, wing eight.

This handsome species is well known to and is commonly the name of "Willet," by which appellation it is especially familiar to all sportsmen who fancy bay shooting.

It breeds the winter in the Southern States, and at the approach of spring commences migrating northward. It arrives on the shores of Long Island about the first of May, and is common on the coast of New Jersey at the same period. It is quite common to the Island, the only complaint being that it is very abundant near its breeding haunts, and that it is a most voracious bird. In the latter part of May it breeds in the tall grass and meadows among the grasses of which material is used for its nests, it is formed. The eggs vary in number, but rather more than two inches in length, and about an inch and a half in breadth, and a very mark at the largest end—the color dark olive, tinged with blackish brown, which markings are more numerous at the great end.

During the season of incubation, if you approach it, and it rises from the nest and flies wildly around, it produces a very peculiar cry, which consists of three notes, when it rises you



lessly repeated when depositing its eggs or young, as to be audible half a mile distant. I have heard the gunners assert that even when they have distinctly heard its vehement variations at a still greater distance.

" During the breeding season, if not disturbed, it passes that incessant interval unmolested, but at such season times is noted for its noisy outcry.

" The flight of the Widgeon is swift, and performed with ease and grace. In general it imitates the sea-march-cock, though when in doubt or alarm about the course and mile, it at least water-slights on the ducked line. And at times when it almost keeps in the water, phasing and dressing its feathers. It is exceedingly wary, and when in exposed situation, however not such the gunner may approach, it seldom allows him to arrive within shooting distance.

" It is said that of the most experienced is seldom equal to its vigilance. The decoy affords a more favorable opportunity to procure it, but even in this manner it is by no means easily obtained, notwithstanding the gunner is well hidden, and has ingeniously executed contrivances to render more deceptive by the perfect imitation of gunshot to perchance, when promptly answered by the screaming Widgeon, whose keen eye, timely detecting deception, it provokes the fowler by quickly changing its course, and darting off like an arrow, usually ascending as it passes on.

" The Widgeon seldom associates with others of its tribe, though occasionally stragglers are seen on the muddy shores, feeding in company with the Gulls, and Sanderlings.

" I am not aware that its nest has been observed on Long Island, though it is said to breed in several of the Middle States, and according to Mr. Nuttall, it has been found in the vicinity of New Bedford. When flying, it is rendered very conspicuous by the prominent markings on the wings. It feeds chiefly on worms, aquatic insects, small crabs, and minute shell-fish. When in good condition its flesh is quite palatable, but not esteemed so great a delicacy as its eggs.



"Many of these birds that frequent the marshes are annoyed by insects which attack themselves under the feathers—particularly under the wings. The Wicket seems to be a favorite bird for these tormentors to quarter upon, so much so that I have frequently supposed that I had performed an act of kindness by shooting it."

No. 5. THE MARLIN—*Chloris Lemmon*, *Brewer*, *Ginsbert*.

\*Bill very long, a little recurved from the middle—tarsus slender, thicker at the base, lower mandible shorter, lower mandible, toes rather long; wings small, very acute, tail short, even, legs long, toes long, rather slender—hind toe small, middle toe longest, anterior toe connected at the base by web, the outer web much larger.

*Lemmon*, *Peter*, *Linn*—*Great Marbled Girdler*.

Great Marbled Girdler, Scripps, Foster, White, Linn, Foster, Brewer, Peter, Lemmon, Foster, Great Marbled Girdler, Foster, A. R. R. Foster, Marbled Girdler, Van Min, Great Marbled Girdler, Linn, Foster, Van

\**Sporus* (*Chrysotis*)—Bill at base yellow, toward the end black, red brown, upper parts spotted and barred with brown, honey, and brownish black, lower parts pale reddish brown, tail darker, barred with black. Adult male with the bill at the base yellowish brown toward the end black, head and neck grayish brown, tinged with pale reddish, marked with dusky—darken on the upper part of the breast, and lower neck. throat whitish, lower parts pale reddish brown, under tail coverts barred with brown, tail reddish brown, barred with dusky, upper tail coverts the same, upper parts barred with brownish black, and pale reddish brown spotted with dusky, inner primaries tipped with yellowish white, scapulars and wing coverts barred with pale reddish brown, and ground white, distal of the first primary white, dusky at the tip; inner shafts of the base white, rest part light brown, excepting the tips, which are dusky. Length sixteen inches, wing nine and a half. Female larger, exceeding the male from three to four inches.



"The Great Marbled Godwit, or 'Mudlin,' as our hunters term it, arrives on the shores of Long Island in the month of May—it cannot be said to be an abundant species—still, we observe, it visits us regularly every spring and autumn.

"It associates in flocks, and usually passes its time on the shoals and salt marshes; it is exceedingly watchful, and will not allow of near approach—but when any of their numbers are wounded, their associates hover round them, uttering loud and shrill cries. On such occasions they crowd together, offering an excellent opportunity for the gunner to secure them. I have shot it from various points in the South Bay, but have met with far better success on 'Pelican Bay,' which at low water is a favorable place for procuring many other species of marine birds. The flesh of the Mudlin is tender and juicy, and is prized as game."

# No. 8. THE HERRONIAN GOWDER—*Larusus Hudsonicus*; *Larusus Fulvus*, Ring-tailed Marlin.

*Larusus Hudsonicus*, Huttonian Godwit, Say & Rich. Huttonian Godwit, Nutt. Marlin. Hudsonian Godwit, Larus Hudsonicus, Aud. Orn. Bay.

"*Species Character*.—Bill blackish-brown, at base of lower mandible yellow; upper parts light-brown, marked with dark brown, and a few small white spots; neck all round brownish-gray; lower parts white, largely marked with ferruginous; basal part of tail feathers, and a band crossing the rump, white. Adult with the bill slender, blackish-brown toward the tip, lighter at the base, particularly at the base of the lower mandible; a line of brownish-white from the head to the eye; lower eyelid white; throat white, spotted with rust color; head and neck brownish-gray; lower parts white, marked with large spots of ferruginous; under tail coverts, variegated with brownish-black and ferruginous; tail brownish-black, with a white band at the base; a band over the rump; tips of primary coverts and bases of quills



dark, upper part of breast brownish black, the rest is white, upper part of neck brownish, cap and throat washed with buff. Irides light brownish, and feet black, wing web and half Young with the lower parts browned over, the ferruginous markings wanting.

It is found with us, and is plentiful in the marshes well known to the sports by the name of "Ring-necked Marsh,"—situated from the alkali land crossing the river to the south. It is a most extraordinary bird of the shores of Long Island, and is occasionally procured in the southern part of the Empire State. It is not found in the middle districts, probably no insects are there. It is found to breed abundantly in the marshes around near the Dutchess town where it migrates to range the interior, especially the coast of the Potomac. Its habits are nearly allied to the prairie falcon, with which it sometimes associates."

No. 5. THE RED-BELLIED SNIP—*Scolecophagus Americanus*;  
*Geol.—Fulgo, Dowitcher, or Quail Snipe.*

Red-bellied Snipe, *Scolecophagus Americanus*, W. Aud. Cat. *Scolecophagus*, Bangs, No. *Scolecophagus Americanus*, New York Central Soc. A. Rich. Brewer or Red-bellied Snipe, New York. Red-bellied Snipe, *Scolecophagus Americanus*, Aud. Orn. Bog.

\* *Scolecophagus Americanus*.—Spring plumage, upper parts brownish-black, variegated with light brownish-gray; lower parts dull orange-red; abdomen pink; throat and breast white; back; rump white, the tail feathers and the upper and lower tail coverts alternately barred with white and black. In autumn the upper parts are brownish-gray; the lower parts grayish-white; the tail feathers, and the upper and lower tail coverts, the same as in spring. Adult with the bill toward the end black, border of the base, top of the head, back of the neck, scapulars, tertials, and fore part of the back, blackish-brown, variegated with ferruginous, sometimes and wing coverts clear brown, the



latter edged with white, the former tipped with the same; land part of bill, white; the rump more ash with reddish part of back and sides, upper tail coverts half white, barred with black, and others edged with same; lower tail coverts tipped white, lower tail dusky, the space between white and the middle band on the lower part of the tail, ash white, barred with numerous, and closely spaced with dusky, unless at the hind part of the tail, where the upper part of the inner web, the alula is lighter. The neck and fore part of breast, spotted with dusky, the lower part of the body with numerous, but not so many as the upper part, and the hind part of the tail. Young with the lower part pale. Winter dress, the upper part of the breast, back and sides more dusky, lower part grey, the lower part of the breast on the sides of the body. Length ten inches and a half, wing six.

Our summer party would that nothing would be lost to us, and that the part with the present summer, due to the old party, would remain the land, increasing the species by the excellent and unmeaning name of 'Dowitcher.'

At the close of April the Red-breasted Scaup arrive on the coast of Long Island. Invited by a plentiful supply of food, at the reflux of the tide, it resorts to the mud flats, and seeks the water-side of the rich supply of shell fish, and in rocks, which Nature either plentifully has provided for it. As time advances it retires to the dry meadows where it is seen probing the soil around the mounds. In the spring, it remains with us but a short time. Soon after returning, it crosses the strait of our long Nantux, and steers for the North, where it passes the season of reproduction. About the middle of July, it returns with its young, and continues its stay during September, and at the season, however, leaves about its favorite feeding grounds until the last of the month.

The whistling note of the Red-breasted, or 'Quail Scaup,' as it is termed in some sections of the Island, is well known to the practical bay-coonmen, and he so truly imitates it, that the call is obeyed at a great distance. Fond of associating in large



flocks, this species is readily decoyed, and is noted for its unsuspicious and gentle manner.

"The Red-breasted Scaup is fond of frequenting the fresh ponds that occur on the lower parts of the beach or meadow, during wet seasons, which situations are made favorable for decoying it, and attended with but little or no fatigue to the gunner, who has concealed in the rank grass that grows on the edge of a dune, or, when shooting over 'decoys' placed in ponds on the beach, he adopts concealment by making a bed of seaweed or oat grass, at a convenient shooting distance. Thus concealed he has an opportunity of observing what is passing around him. Should a wandering flock meet his eye, or the notes of a distant group fall upon his ear, he pipes his skull whistle in accordance with their peculiar cry, which is answered by the leaders of the roving band, and echoed by the wary gunner, whose hopes now mount high, as he sees them quicken their course, wheel, and advance towards the 'decoys,' whose well-timed, though silent forms, are made partners in the treachery.

"It sufficed to sight, it is not unusual for the decoys to wait minutes in watching among the decoys before it discovers the deception. Flying close together, and being possessed but hovering over the silent group that leads them to destruction, the gunner thus their ranks by pointing into the body of the flock his deadly fire. Notwithstanding great success is had, it not infrequently happens that some of those which escape, return and alight among the dead bodies of their companions, sharing—with the reloading of the gunner's pipe— their fate.

"In dry seasons, when the shallow ponds have disappeared, the scattered flock is observed along the muddy flats, wading about in the shall water, though seldom venturing beyond knee-deep, and seldom to so great a depth. Even in these sparsely-sprigged, but little address is required to approach within shooting distance. I have often had opportunities of witnessing their dullness, in being apprised of danger, while they were feeding in company with various species of shoreland.

"Long before the gunner thinks of taking aim, the watchful



Gull unfolds its wings, and passes still farther on from danger—quickly followed by the shy Widgeon. The less timid Yellow-shanks begins to feel insecure—moves about with hurried steps—straps to take one more morsel from the various delicacies that are profusely scattered round it—casts a glance at the approaching gunner, feeling that it has lingered too long for its safety, raises its wings, utters a suppressed and tremulous note, and leaves no backward or past momentary pause of greater security. The host of small Sandpeeps that are busily engaged in glancing their tale, become apprehensive, neglect their occupation, take wing, and wheel off, leaving the Red-breasted Snipe alone with the gunner. The friendly 'Tom,' from its elevated and secure retreat, observes what is passing below, flies around in circles, uttering loud screams, urging the waterfowl to depart, which kindly warning is unheeded until the sport-man has aimed too near for the game to escape. As he levels his gun, the terrified Snipe becomes aroused, springs up, and the next instant lies like a clod upon the muddy shore.

The Red-breasted Snipe is capable of rapid and protracted flight, at times performed to a great elevation. During dry seasons, when in search of its favorite pools, it flies high, and at such times is not so readily decoyed. At Egg Harbor, where it is abundant, it is called by the gunners 'Brown-back.' "

# No. 10. SEMIPALMATED SANDPEEP.—*Tringa Semipalmata*; Wilson.

Semipalmated Sandpeep, *Tringa Semipalmata*, With Amer. Orn. *Tringa Semipalmata*, B. exp. Nat. Semipalmated Sandpeep, Natl. Mus. *Tringa Semipalmata*, Aud. Orn. Bog.

"*Species Character*—Bill rather stout, broad toward the point, along the tip about one inch, length of first seven-fourths of an inch; tail and legs black; toes half webbed. Adult with the bill slender, about the length of the head—dark green, nearly approaching to black; head, sides, and hind part of neck ash-gray, streaked with dusky; upper parts blackish-



brown, the feathers colored with greenish blue. Secondary coverts tipped with white, primary coverts brown. Tail coverts are the feathers on the rump, upper tail coverts brown, white quills above, and below. Tail feathers are brown, with white bases on the inside, part most darker near base of central line. Tarsus pure white, legs black. Length six inches, wing half, wing four.

"This common species inhabits almost every part of the North American continent. In large flocks they are common on the beaches and sand bars, and are always about the water, as well as on the shores of the interior lakes and streams. When feeding, this species is often about in single parties, but on being pursued it rises with a peculiar rapid movement—collective together in such close order, that as many as twenty and more times as many numbers are killed at a single shooting. When closely pursued they move off in one line, uttering a sharp note, which by imitating they shortly close. They are chiefly on marshy, meadow pastures. One observed to be found in a thicket, and perched on a weed in a pond. In the fall it gets very fat, and is considered delicious. It breeds at the North, laying from a five to seven eggs spotted and blotched with black."

"It arrives on our coast in summer and remains with us through the season to open until quite late in autumn, when it departs for its winter quarters at the South."

#### NO. 11. Wilson's Snipe.—*Lophes Wilsoni*, Aud.

"Though more abundant on the coast, it is not entirely confined to the sea shore, but is likewise met with along the margins of the interior lake, and rivers. On the shores of Lake Huron it is very plentiful, and during the month of September is usually in excellent condition for the table. By summer's evening, it is neglected on account of its inferior size, though by many it is esteemed far superior, both in flavor and palateness, to many of our larger shore birds. This species has a low, quacking note,



when alarmed, it moves off in a confused and irregular manner, uttering a short, twitter. During the month of October, it migrates southward.

"It is in spring it appears on the shores of New-Jersey and Long Island, and here the Semipalmated Sandpiper, numbers are reduced in the summer months. But in other localities their numbers are not found, and I am assured that they breed within the limits of the Union. On the coast of Labrador, during the breeding season, both species were observed by Mr. Audubon."

No. 17. THE THUNDER-STRIKE, *latipennis*.—Vulgar, *Beant Bird*—*Harefoot Snipe*.

Then, I dropped into under the *Synaldis* category, Hump Sea Synaldis category, *Paraldis*, Sea & River Turnabout Sea (Hill & Van Man) *Paraldis* *Synaldis* category, All the Bag.

"*Spizella monticola*—Bill black, feet orange, the head and sides of the neck streaked and patched with black and white; fore part of the neck and upper portions of the sides of the breast black, lower parts hind part of the back, and upper tail coverts white, rump dusky, rest of the upper part reddish-brown, mottled with black, primaries dusky, a band across the wings, and the throat white. Young with the head and neck diagonal, fore part of the back, and sides of the breast dusky, crown streaked and marginal with grayish white, wing coverts and tertials broadly margined with dusky black, young. It can at all times be identified by its having the throat lower part hind part of the back, and the upper tail coverts white, and the rest of the rump dusky. Adult with no bill black; throat white, sides of the head mottled with black and white; crown streaked on a black or white ground, on the hind neck a patch of white, a patch of black on the sides of the neck, of

I have therefore placed them next in order.







inch, and one-eighth; length of tail one inch; hind toe wanting. Alula with bell straight, about as long as the hand. Spring plume to, upper parts, with the throat, back and upper part of the breast rufous, intermixed with dusky and grayish white, deeper red on the back; lower part of the breast, abdomen, and sides of the body pure white; tail and feet black; claws small, compressed, primitive, outer web black, inner webs light brown; shanks brown at the base, tips black, rest pure white; secondaries light brown, broadly margined with white. Winter dress, lower parts white; upper parts grayish white, intermixed with black or dusky, darker on the back. Length seven inches and three quarters; wing four and seven-eighths.

The Sandpiper is said to be an inhabitant of both Europe and America. According to Latham, it is known to be an inhabitant of the remote coasts of Australia, and is found on the shores of Lake Baskin in Siberia. To the coast of the United States it is one of the most common species, but with us I have never observed very large numbers during spring. About the middle of August it arrives in flocks on the shores of Long Island, and usually by the first of September is very abundant.

Sometimes it is seen occupying, with other small species of Sandpipers, the shoals and mud flats that occur in the shallow part of the bay, though generally it seems to prefer the more immediate borders of the ocean. I have lately, during the early part of autumn, visited the spot without meeting with large groups of Sandpiper collected along the beach, of which they have almost entire possession. It is most of our shore birds find more productive feeding grounds on the rocks and that is daily over-taken by our inland bay.

The Sandpiper is of a sociable disposition, and seeks for a few companions, and is observed probing the sand for small insects, shells and mollusks—its principal article of diet, however, consists altogether of animal food, as it is seen attending the young birds, which burrows it with shavings and the like.

When feeding along the extreme verge of the ocean, it is pleasing to watch its active movements when swimming or re-







blackish-brown; tail olive-brown, faintly barred with dusky, and tipped with white; upper parts brown, barred with dusky; inner primaries tipped with white; secondaries more broadly tipped with the same; a band of white behind the eye—a white ring round the eye; outer toes connected by a membrane as far as the first joint. Length, eight inches; wing three and seven-eighths. Young without the spots on the lower parts.

This small and well marked species is the last of the family that visits us in the spring. It appears on Long Island about the middle of April, and breeds with us permanently until late in autumn, continuing its appearance after most of the other species of *Tringa* have departed for their winter quarters.

It is distributed throughout the United States, and occurs at Labrador, where, according to Mr. Audubon, as with us, it breeds, as well as along the coast of the Middle and Eastern States, and the interior. It is a very common species, and from its habit of constantly rising and lowering itself, it is familiar to persons residing in the country by the expression of 'Tert-er,' or 'Tilup.'

They do not associate in large flocks, and like the former, are rather solitary. They inhabit the moist grounds in the vicinity of streams and ponds, and often resort to the ploughed fields to glean up the worms that lie exposed in the furrows. Early in the month of May, it commences preparing its nest, and retires to a neighbouring field for that purpose. The retirement—which is formed of dry grass and straw—is placed on the ground in a cluster of weeds or briars; sometimes it is found in the most exposed part of the pasture ground, only partially sheltered by the straw &c. retained by which it is surrounded. It is also found along the banks of small streams, and on the margins of ponds. The eggs, four in number, are of a pale yellowish cast, irregularly spotted with blackish-brown. The young, soon after being hatched, runs among the grass, uttering a low, feeble, whistling note, which soon increases in cadence, so as to be undistinguishable from the fall and clear voice of its parents—and at that early period it is seen giving



that peculiar movement to the tail feathers for which this species is noted. The flight of the Spotted Plover is very swift, seldom being seen flying in a straight line, but zig-zagging, and usually performing its aerial gambols at a short distance above the surface. When wounded in the same manner as the quail, and swims under water with considerable ease. In pairs, or small parties, it takes possession of the muddy margins of all our water courses, from which it makes excursions to the adjoining fields, sometimes striking water fow and deer.

"Being exclusive in its habits, it never contributes to the variety of other species, though it is not uncommon that we see the attractive Semipalmated Sandpiper sharing with it the produce of its feeding grounds."

## PLOVERS.

### No. 1. Black Breasted Plover—*Common Red Headed Plover*, *Charadrius Helveticus*; *Linn.*

Black-headed Plover, *Charadrius helveticus*, Vieill. Young One, *Charadrius helveticus*, Bump. Sea Plover, *Charadrius*, Aud. *Charadrius helveticus*, Les. & Rich. Black-browed or Sand Plover, Vieill. *Charadrius helveticus*, Pons. *Charadrius helveticus*, Aud. Orn. Bog.

\* *Species Charadrius*.—Bill about three-quarters of an inch and five-sixteenths; length of tarsus, one inch and three-eighths. Adult male with the bill black; strong dusky streak on the head; crown, back, and sides, throat, fore-neck, breast with a transverse band of the glaucous black; anal part of the abdomen and flanks white; forefeet white; anal and posterior sides of the neck and breast, white; crown, occiput, nuchal neck, and scapulars spotted with dusky; upper parts blackish brown; the feathers broadly tipped with white; eyes greenish brown; throat and upper tail coverts white; breast with dusky-tinted feathers tipped with white; lower tail coverts white, the outer feathers tipped with black; primaries and their coverts black; base of the



latter margined with white; primary shafts, about two-thirds from the base, white; tips blackish-brown; part of the inner webs of the outer primaries white, both webs of the inner primaries partially white, secondaries white at the base, margined with the same, feet black, toes connected by a membrane. Female smaller. Young with the upper plumage grayish-brown, the feathers spotted with white, throat, fore-neck, and upper part of the breast greenish-white streaked with dusky; rest of the lower parts white. Length of adult male eleven inches and three-quarters, wing seven and a half.

"Early in the month of May the Black-bellied Plover arrives from its northern winter quarters. After spending a few days on the sand-bars and beaches it moves to the North. In the month of August it returns with its young, which is so different in plumage that by many it is considered a distinct species, being called 'Bull or Rock-headed Plover.' Though shy, it is frequently enticed within gunshot by imitating its plaintive note. In autumn, it is distributed along the seacoast, subsisting on minute shell-fish and marine insects, on which it gets very fat. It remains with us until the latter part of September, when it moves southward, its migratory course extending to the southernmost extremity of the Union.

"Early in autumn this species is very abundant on Montauk. During the month of September, I met with it throughout my entire route across the hills; but found it more numerous on a large field place, abounding with grubs, worms, and insects of various kinds, about four miles from the Light-house. On Montauk I also fell in with straggling parties of the Long-billed Curlew, and found the Yellow-shank—*Totanus flavipes*—and Tattler—*T. confusus*—quite abundant. These I found in greater numbers in the villages, along the margins of pools and ponds."



No. 2. AMERICAN GOLDEN PLEASER—*Lodge, First Bird—often confounded with the C. plebeia or Partridge's Sandpiper—Chrysobolus Macrourus.*

Golden Plover, Chattering plovers, With more than Chattering plovers.  
Rump New Chattering plovers, Golden Plover, No. 2. R. K. American Golden Plover, Chattering plovers, And the Bag.

"*Species Character*—Bill rather slender, along the gap one inch and an eighth; tarsus one and nine-sixteenths. Adult with the bill black, much shorter than *C. debilis*; rounded, and a band over the eye, extending behind the eye white; upper parts, including the crown, brownish black, the feathers marked with spots of golden yellow and dull white; quills and coverts dark grayish brown; secondaries pale; the outer marginal web yellowish-white; tail feathers grayish brown, barred with pale; the center with dull yellow; vants of the wing quills white toward the end which, with their bases, are dark brown; lower parts brownish black, though in general the hind part of the with brown, dull white, and black; lower coverts white, the lateral marked with black; feet black. In late in autumn, the golden markings on the upper parts are not so distinct, and the lower parts are grayish. Length ten inches and a half, wing seven and one-eighth.

"*Distinction*—*Chrysobolus* aff. to the Golden Plover—*C. plebeia*—and *Europe*. The latter is somewhat smaller in size, as well as having the feathers on the sides of the body under the wing—the extreme white, whereas these feathers in our species are gray, and in the *Europe* in species which I have had an opportunity of examining the golden tails appear more numerous, and of a richer color.

"The American Golden Plover arrives on Long Island in the latter part of April, and soon passes on to the northern regions, where it is said to breed. In the early part of September, on its return from its natal abode, it frequents the Hempstead Plains, Shinnecock Hills, and Montauk, where it breeds.



a variety of insects abounding in such places. Grasshoppers seem to be its favorite fare, and when berries can be obtained, they also contribute to its support.

"I have occasionally shot it along the shores and about the ponds on the low wet meadows, but in general it prefers high, dry lands, uncultivated rather woods. The Hempstead Plover are well adapted to its habits, and during some seasons it is quite abundant on this miniature prairie. It is better known to our gunners by the name of "Pinst Bird," so called from being more plentiful during the early frosts in autumn, at which season it is generally in fine condition, and exceedingly well flavored. Commanding a high price in the New York markets, it is eagerly sought after by the gunners, and as it requires the fatigue and exposure attending the shooting of shore birds, it affords much amusement to sportsmen.

"On the ground, the Golden Plover displays a great deal of activity, and when observed, often runs with considerable rapidity before taking wing. It is less timid than the Black-bellied Plover, and is easily deceived by imitating its peculiar mellow note. I have often observed it, when passing in a different direction from that in which I was lying, check its course, wheel round, and present an easy mark.

"Its stay with us, as before mentioned, is very short, and as the season advances it returns southward. It associates in flocks, and when migrating, moves off in a regular manner."

### No. 3. Ring Plover—*Charadrius Semipalmatus*.

Ringed Plover, Longs Lutescens, Wis. Amer. Orn. Charadrius Semipalmatus, Bangs. Sci. American Ring Plover, Charadrius semipalmatus, Sw. & Bach. Semipalmated Ringed Plover, Nat. Mag. American Ringed Plover, Charadrius semipalmatus, Aud. Orn. Biog.

"*Specific Character*.—Bill shorter than the head; base orange color; toward the point black; a broad band on the forehead white; margined below with a narrow black band, above with a broad band of the same color; rest part of the head wood-



known. Lateral toes connected by a membrane, as far as the first joint, inner toes about half that distance. Adult male with the bill flesh color at base, anterior to the nuchal band, a series of black commencing at the base of the upper mandible, passes back to the eye, cutting down and across some of the toes, a band on the fore part of the head pure white, fore part of crown black, occiput more brown; chin, throat, and neck passing round on the hind neck, pure white, crossing below on the lower portion of the neck, a broad band of black; upper plumage wood brown, primaries blackish brown, shafts white—blackish brown at their tips; secondaries slightly edged with white on the inner webs; outer webs nearest to the shafts an elongated spot of white; wing coverts wood brown, secondary coverts broadly tipped with white, breast, abdomen, interspersed lower tail coverts pure white, tail brown, lighter at the base; outer feathers white—the rest broadly tipped with white, excepting the middle part, which are slightly tipped with the same. Female similar, with the upper part of the head and the band on the neck brown. Length seven inches and a quarter, wing five.

"This species, though smaller, resembles in plumage the Ring Plover of Europe. In the north of Mexico the American or Semipalmated Ring Plover is so numerous, and sojourneys to the North. It returns to us in the latter part of August. It frequents similar situations with the Semipalmated Sandpiper, with which it is often seen changing its dress—and like that bird, admits of near approach. When alarmed it utters a sharp note. Late in autumn it migrates to the South, and according to Mr. Audubon, spends the winter in the Floridae."



#### No. 4. PIPING PLOVER—*Charadrius Melodius*.—*Volgo, Beach Bird.*

Rag Plover, *Charadrius hutchins*, W. & Amer. Orn. *Charadrius melodus*,  
 Ord. Piping Rag Plover, Nutt. *Uran.* Piping Plover, *Charadrius melo-*  
*dus*, Aud. Orn. Bep.

"*Specific Character*—Bill shorter than the head; at base orange-red, toward the end black. Fore-neck and cheeks pure white, bordered above with black; rest part of the head very pale brown. Adult male with the bill short, orange at the base, anterior to the nostrils black; forehead white, with a band of black crossing directly above; upper part of the head, hind-neck, back, scapulars, and wing-coverts pale brown; rump white, the central feathers tinged with brown; tail brown, white at base, tipped with the same; lateral feathers pure white—the next with a spot of blackish-brown near the end; upper tail-coverts white; primaries brown, a large portion of the inner webs white; a spot of the same on the outer webs of the inner quills; secondaries white, with a large spot of brown toward the end; lower surface of the wings white, a black band round the lower part of the neck, broadest on the sides where it terminates; entire lower plumage white. Female similar, with the band on the neck brown. Length seven inches, wing four and a half.

"To the south shore of Long Island the Piping Plover is common. On the north side of the bay I have seldom seen it. It seems to prefer the sandy beaches and shoals, where it collects small bivalve shells which lie exposed at low water. I have also observed it along the surf, feeding on the deposits of the receding waves. It breeds here, making no nest, other than a slight excavation in the sand; the eggs, four in number, are of a pale yellowish or cream-color, speckled with brownish-black.

"When pursued, it runs rapidly; if closely followed, it takes wing, uttering a melior note—though at such times its voice is more shrill than the soft tones it makes when not disturbed. In



autumn, like most of the shore birds, it gets very fat, and is excellent food. With the baymen it is known by the name of "Black Bird."—*Garrod's Breeding Land Island.*

In addition to these we have the well-known, common and beautiful variety, the KNOTTED Plover, *Charadrius Nodulosus*, secured from its peculiar cry, which it is both cruel and useless to kill, as it is too insignificant to be regarded as game; the ROBERT MONTEAU Plover, *Charadrius Montauvi*, which is too rare; and WILSON'S Plover, *Charadrius Wilsoni*, too humble to be regarded as game.

THE PRINCEBERRY and LEBLODGE come under the same predicament with the varieties of Plover last named, and we shall accordingly pass on to the CURLEWS, three varieties of which are commonly killed along our shores, not considering the AVOCET *Recurvirostra Americana*, known by sailors as the "Blue Stocking," or the BROWN-STICKED STUR, *Himantopus Nigripes*, or "Lawyer," as he is sometimes called, worthy of my notice beyond the mention of their names, although they are often shot with other varieties of shore birds.

## CURLEWS.

### No. 1. THE LONG-BILLED CURLEW, OR SOKKUMBI—*Numenius Longirostris*.

"*Specific Character.*"—Bill toward the end decurved, upper part of the throat, and a band from the bill to the eye, light buff; general plumage pale reddish-brown; head and neck streaked with dusky; upper parts marked with blackish brown, tail barred with the same; abdomen plum reddish-brown; feet bluish. Length twenty-six inches, wing eleven. The bill of the specimen from which this description is taken, measures eight inches. The bills of individuals of this species vary, but the length is at all times sufficient to determine the species.



"This bird is more abundant at the south. On 'Folly Island,' about twenty miles below Charleston, I am informed that many of them breed. They are regular visitors at Egg Harbor, and Long Island in the spring and summer, and have been seen in the latter place as late as the middle of November. Mr. Hensler informs me that he has met with it on the prairie lands in Illinois in the month of May.

"The Long-billed Curlew, or 'Sack-bird,' as many term it, frequents the muddy shores of bays and marshes, where it collects minute shellfish, which with worms, and various insects, constitute its food. When moving about in flocks, they fly much after the manner of Wild Geese, the leaders uttering a hoarse, dull note, which, by imitating, the group readily follows, and are provoked into answering the leader's call when at a greater distance from his deerys than any other species of shore birds. When approaching near to the deerys, they spread their wings, and sail slowly up, presenting such a fair mark, that those singled out by the gunner seldom escape. Its flesh is rank, the young partaking of the same flavor. The sympathy existing in these birds is so strong, that I have known of instances of flocks being kept within gun-shot by the cries of their wounded companions, until as many as fifteen have shared a similar fate."

## No. 2. THE HUDSONIAN CURLEW—*Short-billed Curlew*—*Lark Curlew*.—*Numerius Hudsonicus*.

*Numenius Hudsonicus*, *Sceloporus Hudsonicus*, W. L. Amer. Orn. *Numerius Hudsonicus*, Bosc. Zool. *Numerius Hudsonicus*, *Hudsonian Curlew*, Sw. & Rich. Fauna Amer. Curlew, *Numerius Hudsonicus*, Vig. Man. *Hudsonian Curlew*, *Numerius Hudsonicus*, Aud. Orn. Eng.

"*Species Character*.—Length of bill three inches and three-quarters; tarsus two inches, lower parts white. Adult with the upper part of the head deep-brown, with a central and two lateral lines of whitish; a brown line from the bill to the eye, and another behind the eye; neck all round pale yellowish.



gray, longitudinally streaked with brown, excepting the upper part of the throat, which is grayish-white; upper parts in general blackish-brown, marked with numerous spots of brownish white, there being several along the inner web of each feather; wings and rump somewhat lighter; upper tail coverts and tail barred with dark brown and ochraceous gray; primaries and their coverts blackish-brown, all with transverse yellowish gray markings on the inner web; the shaft of the first quill white—of the rest brown; breast and abdomen grayish-white, the sides tinged with cream color, and barred with grayish brown; bill rather more than twice the length of the head, of a brownish-black color—at the base of the lower mandible, flesh-colored. Length eighteen inches, wing nine and a half.

"This bird arrives on Long Island in the month of May. It frequents the marshes and muddy flats, feeding on worms and minute shell fish. With us, it is not so numerous as the long-billed species, with which it sometimes associates. Early in June it moves on to the North where it passes the season of reproduction; in the latter part of August, while journeying southward, it again makes its appearance on the salt marshes, and sometimes it frequents the uplands, where it procures berries and insects of various kinds, on which it grows very fat—though in general its flesh is not well flavored.

"The flight of the Hudsonian Curlew is very extraordinary; it obeys the fowler's whistle, and presents an excellent mark. This bird is remarkable for sympathizing with its wounded companions—a trait of character so proverbial in the Long-billed Curlew.

"Occasionally stragglers are observed to linger behind until the early part of November; but in general, all have left for winter quarters by the middle of October. The name generally given to it by our gunners, is 'Short-billed' or 'Jack Curlew.'"



No. 3. ESQUIMAUX CURLEW—"Dee Bird"—"Fates,"—*Numerius borealis*.

*Numerius borealis*, Bonap. Syn. *Numerius borealis*, Esquimaux Curlew, Sw. & Rich. Esquimaux Curlew, *Numerius borealis*, Nutt. Man. Esquimaux Curlew, *Numerius borealis*, Aud. Orn. Bog.

"*Specific Character*.—Bill along the gap about two inches and a quarter; tarsus one inch and five-eighths; upper parts dusky-brown with pale yellowish-white, marked all over with pale reddish-brown. Adult with a line of white from the bill to the eye; eyelids white; upper part of the head dusky, spotted in front with grayish-white, a medial band of the same color; throat white; neck and breast yellowish-gray, with longitudinal markings of dusky on the former, pointed spots of the same color on the latter; abdomen dull yellowish-white, flanks barred with brown, lower tail coverts the same as the abdomen; tail and upper tail coverts barred with pale reddish-brown and dusky, tipped with yellowish-white; upper parts brownish, the feathers tipped with pale reddish-brown, the scapulars margined and tipped with lighter; primaries dark-brown, margined internally with lighter—the first shall white, with the tip dusky—the rest brown. Length fourteen inches and a half, wing eight.

"In New-Jersey, New-York, Massachusetts, and Rhode Island, this species is seen every season. It frequents the open grounds in the vicinity of the seacoast, feeding on grasshoppers, insects, weeds, worms and berries. It arrives among us in the latter part of August, and remains until the first of November, when it assembles in flocks, and migrates to its winter quarters which are said to be south of the United States. I have shot a few stragglers in this vicinity as late as the twentieth of November. It occasionally associates with the Golden Plover. In the autumn it is generally in fine condition, and unlike the former two, its flesh is well flavoured. In the vicinity of New-York it is known by the name of 'Fates'—in the Eastern States it is called 'Dee Bird.' It breeds on the barren grounds at the North."—*Gérard's Birds of Long Island*.



With this species, I conclude my notice of Shore Birds, or Bay-Snappers, they are usually and most barbarously termed, there being but two birds out of the whole number the "Red-breasted Scaup," which is very common, and the "Semipalmated Scaup" or "Willet," which belong to the species of Snappers, or can be so termed, even by a liberal courtesy. Before proceeding, however, to enter upon the mode of taking these little waders, I shall proceed for the sake of uniformity to the ornithological descriptions of the Swan, Goose, and Sea Ducks.



## WILD FOWL.

## WILD SWANS.

## THE AMERICAN WILD SWAN.

*Cygnus Americanus* —Sharpley—*American Journal of Sciences and Arts*.

"Male, 53.84.

"Common during winter, in the middle Atlantic districts especially on Chesapeake Bay. Not seen south of Carolina. Columbia river: breeds in the Fur Countries.

"Adult male:

"Bill rather longer than the head, large, higher than broad at the base, gradually becoming more depressed. Upper mandible with the dorsal line concave at the commencement, then descending and very slightly convex to beyond the nostrils, at the end decurved; the ridge broad and flat at the base, gradually narrowed, convex toward the end, the sides nearly erect, and somewhat concave at the base, gradually sloping, and toward the end convex, the margins nearly parallel until toward the end, when they widen a little; the tip rather abruptly rounded, means truncate, obtuse. Nostril medial, elliptical, direct near the ridge; nasal groove elliptical. Lower mandible flattened, slightly recurved; the angle long and rather narrow, the edges parallel, the tip truncate, the ungues somewhat triangular.

"Head of moderate size, oblong, compressed. Neck very long and slender. Body very large. Feet short, stout, placed



a little behind the centre of the body, about one foot an inch and a half, and reticulated. Tarsus short, moderately compressed, reticulated all round with angulations, of which the anterior are larger, hind toe very small, posterior more granulate beneath. Anterior toes longer than the other, the outer a little shorter than the third; all reticulated above and laterally to the second joint, and filar in the rest of their extent, connected by webs of which the margins are entire, the outer with a black margin, the inner with a broader two-banded margin. Claw of moderate size, angled, strongly flattened, notched, the middle toe with the inner edge dilated.

Plumage full, compact above, bedded beneath, feathers of the head and neck shorter, smaller and rounded. Wings ample, convex, the first quill eight-twifths of an inch shorter than the second, which is longest, but scarcely exceeds the third, the last, second and third coming out on the inner wing. Second wing long, broad and rounded. Tail very much rounded at twenty broad, compact feathers, of which the outer ones are each and runs twice the width of the middle. The outermost feather spans on the base part of the head, from the corner of the eye, and out lower mandible and middle of mouth, where it flows over the lower foot and claws back. The posterior ones are pale white.

Length to end of tail, 10.5; extent of wing, 19; to end of wing, 18; extent of wing, 8.5; culmen, the whole, 4; tarsus, 1.5; from toe tip to the eye, 1.5; unguit on the eye, .25; toe, .7; middle toe, — its claw, .5; second toe, .1; its claw, .5; third toe, .1; its claw, .5; fourth toe, .1; its claw, .5; webbed, 2.5 lines. Another individual measured only 14 lines.

The female is somewhat smaller, but otherwise similar.

The young in its first plumage is of a tawny light ochraceous, paler beneath, the head and upper parts of the head fringed with red. The bill reddish flesh color, dusky at the point, the spaces between the eye and the bill and between its nasal angles, covered with minute feathers, which entirely disappear in the adult. The feet are dusky with blackish.



"I have never observed any Swans of this species along the Atlantic coast, or on the rivers that open upon it, beyond Cape Hatteras in North Carolina; and although they are very numerous on the waters of Chesapeake Bay and the stream adjacent, as well as in other parts of the middle districts, I am yet of the opinion that the great body of them, spend the winter about the Columbia River, extending their autumnal migrations westward, along the shores of the Pacific Ocean into California, and that the columns formed by these birds when about to leave their breeding grounds in high latitudes, divide into parties, of which one column takes its hand make their way from certain points of departure, toward our middle districts, while the rest are persons following the valley of the Rocky Mountains.

"When they fly to a distance they proceed at a great length, with a steady and well sustained flight, though by no means so rapid as the Pintail or Snipe, this difference probably arising from the greater weight and the extent of the latter. They usually move in long lines forming the acute angle of a hairless triangle, the leader often changing his position and flying into the rear. On several occasions I have seen swans or even loosing the long single files behind them in a kind of disorderly crowded manner, which was continued until the birds were out of sight.

"Not having had sufficient opportunities of studying the habits of these birds, we never saw them in Chesapeake, where they are most numerous, while in the middle districts, I have pursued a few of them, and of them, kindly transmitted to me by Dr. Sharpless, of Philadelphia.

"About the first of September, two Swans bore the shore of the Pacific Ocean, and made their way up to the base and river of the great Hudson's Bay, one day, where they remained, departed for a departure to the water, until October, when they collected in flocks of twenty or thirty, and seizing five or six number two or cat hawk or the like in from a prolonged war, and then from various depart for more general clumps.



When making either their semi-annual migration or shorter expeditions, an occasional scream, equal to "how do you all come on, behind?" issues from the leader, who has almost immediately responded to by "our position 20 m. with us" "our way" "our destination." When the leader of the party becomes interested with his extraordinary cutting the air to find in the air and the neighboring trees his place. When mounted on they sometimes are, several thousand feet above the earth, with the stream, a small and delicate outline hardly perceptible against the clear blue of heaven, this harsh, vocal, softened and undistorted by distance, and issuing from the immense void above, assumes a supernatural character of tone and impression, that excites, the first time heard, a strangely peculiar feeling.

"In flight these birds make a strange appearance, their long necks protruded and pressed, at a distance, more like with thick points, and one eye more than one, but their webbed feet, their heavy bodies, and triangular wings, warning but more appendages to the prolonged point in front.

"When thus in motion, their wings pass through so few degrees of the circle, that, unless seen horizontally, they appear almost quiescent, being widely different from the noisy, semi-circular sweep of the Gannet. The swimmer is moving with a moderate wind, a few fathoms, and a steady breeze, and the air, certainly to be seen, is not so clear as the air of the sea. I have often traced the flight of the Gannet and heard to make a minute a constant rapidity, and when the two birds, in a change of feeding ground, have been flying near each other, which I have often seen, the swimmer is pressed with nearly double velocity.

"The swimmer, in traveling from the northern parts of America to their winter residence, generally keep far inland, mounted above the highest peaks of the Appalachians, and rarely over the water courses like the Gannet, which usually stop on the route, particularly if they have taken the sea route. The swimmer rarely pause in their migrating flight and so it is seen, above the reach of which occurrence they generally avoid. They



have been seen following the coast in but very few instances. They arrive at their winter homes in October and November, and immediately take possession of their regular feeding grounds. They generally reach these places in the night, and the first signal of their arrival at their winter abode is a general burst of melody, making the horizon ring for several hours with their excited congratulatory, and by making sounds for a long time, and plucking their damaged feathers. From these lodgings they rarely depart, unless driven further south by intensely cold weather, until their coming season. When the spring arrives, a similar collection of bonapartes the marsh, takes place in March, and after disturbing the tranquil bosom of the water for a night, by incessant wading and diving, and continuing the quiet neighborhood by a constant chatter of consulting tongues, they depart for the north about daylight with a general *fin-de-guer* of unmusical screams.

The Chesapeake Bay is a great resort for Swans during the winter, and whilst there they form collections of from one to five hundreds on the flats near the western shore, and extend from the outlet of the Susquehanna River almost to the Rip-Raps. The converging streams also present fine feeding grounds. They always select places where they can reach their food by the length of their necks, as they have never, so far as I can learn, been seen in this part of the world to dive under water, either for food or safety. Hearne says that, at Hudson's Bay, 'by diving and other manœuvres it is impossible to take them by hand while moulted.' I have often seated myself for hours within a short distance of several hundred Swans, to watch their habits and manners, and never saw one pass entirely under the water, though they will keep the head beneath the surface for five minutes at a time.

The food they are most partial to is the *canadensis* grass — *Valeriana Canadensis*—mosses, insects, and shell-fish; never, I believe, touching fish, however tenderly pressed for support. The Geese and Swans frequently feed, but never fly, together.

These birds are so exceedingly watchful, that if there are



but three of them feeding together, one will generally be on guard, and when danger approaches there is some mute sign of alarm, for I have never heard a sound at such times.

— However much noise has been made before, the instant an alarm occurs there is perfect silence. Their heads are erected, a moment's examination determines the measure, when, if the case be not too urgent, they depart on swimming if escape be necessary. They rarely fly even from the pursuit of a boat, unless very closely followed, and when they do arise from the water, either for escape or from chase, it is generally with a scream, and when alighting particularly among others, there is usually a 'how-dye-do' sort of expression on all sides. Even when wing-locked they can swim with great rapidity, and if not otherwise hurt, a single oarsman in the best constructed boat, can rarely overtake them.

— Whilst feeding and dressing, Swans make much noise, and through the night their vocalizations can be heard for several miles. Their notes are extremely varied, some closely resembling the deepest tone of the common turkott, whilst others run through every modulation of false note of the French horn or clarinet. Whether this difference of note depends on age or sex I am not positively assured.

— The Swan requires five or six years to reach its perfect maturity of size and plumage, the yearling cygnet being about one-third the magnitude of the adult, and having feathers of a deep leaden color. The smallest Swan I have ever examined, and it was killed in my presence, weighed but eight pounds. Its plumage was very deeply tinted, and it had a bill of a very beautiful flesh color, and very soft. This cygnet, I presume, was a yearling, for I killed one myself the same day, whose feathers were less dark, but whose bill was of a dirty white, and the bird weighed twelve pounds. This happened at a time when my attention was not turned scientifically to the subject, and I have forgotten the other singularities of the specimens. By the third year the bill becomes black, and the color of the plumage less intense, except on the top of the head and the back part of the



neck, which are the last parts to be forsaken by the color. Swans of the sixth year have assumed all the characters of the adult, and very old birds have a hard protuberance on the head of the first joint of the wing. When less than six years old, these birds are very tender and delicious eating, having the color and flavor of the goose: the latter quality, however, being more concentrated and business. Hearne considers a Swan, "when roasted, equal in flavor to young beefsteak, and the cygnets are very delicate." As these birds live to a great age, they grow more tough and dry as they advance, the *potroards* being as unpalatable and unsavory as the cygnets are tender and delightful.

"There are many modes practised in the United States of destroying these princely ornaments of the water. In shooting them while flying with the wind, the writer just mentioned declares they are the most difficult bird to kill he knew, it being frequently necessary to take eight ten or twelve feet before the fall." This I should consider an unnecessary allowance, unless driven by a hurricane, but, on ordinary occasions, the fall is aimed at, and if going with a breeze at a long shot a foot before the fall would be quite sufficient. The coating is so extremely thick on old birds, that the largest drop shot will rarely kill, unless the Swan is struck in the neck or under the wing, and I have often seen large masses of feathers torn from them, without for an instant impeding their progress.

"When wounded in the wing alone, a large Swan will readily beat off a dog, and is more than a match for a man in four foot water, a stroke of the wing having broken the arm, and the powerful feet almost obliterating the face of a good sized duck shooter. They are often killed by rills of shot thrown from the shore into the feeding column, and as a ball will ricochet on the water for several hundred yards, a wing may be disabled at the distance of half a mile.

"These birds are brought within shooting range by sitting down and upon them whilst feeding, and as they rise against the wind, and cannot leave the water for fifteen or twenty yards,



against which they strike their enormous feet and wings most furiously, great advantage is gained in distance. They should be allowed on all occasions to turn the scale, for a breast shot rarely succeeds in entering.

"When two feeding cormorants separated by a single point, by distracting the swans on either side usually they will pass and re-pass very closely to the proportion of land, and usually taking as they do the straight line, even gunners, to prevent disputes, indicates the bird he will shoot at.

"In water, boats covered with packs of ~~various~~ sportsmen being dressed in white, are paddled or allowed to drift during the night into the midst of a flock, and they have sometimes been killed by being knocked on the head and neck by a pole. There is, however, much danger in this mode, as others may be engaged in like manner, and shooting at a short distance, the persons might not be readily distinguished from the swans. These birds are well aware of the range of a gun, and I have followed them in a skiff for miles, drawing a flock of several hundreds before me, without the possibility of getting quite within shooting distance.

"When more than one person is shooting, it is usual for each to select a particular swan, and if these be not enough for all, two will take a particularly good bird, in fact, the bird will decide its possession after and by some play of chance. There are willing to take the first bird, even though the opportunity last in the direction of flight would compel them to continue to move to do so, not only from the difficulty of turning round and killing the old ones, but because there is more loss time and a story shot from the neighbor's gun, than from the destruction.

"In the autumn of 1876, the winter with another person was on Abbey Island, where seven swans were approaching the point in one line, and three others at a short distance behind them. The small group appeared evidently anxious to pass the larger and as they doubled the point it went sixty or seventy distance, the three formed with the second bird of the larger flock a square of less than three feet. At this moment I at



guns were discharged, and three Swans were killed, and the fourth so much injured that he left the flock and reached the water at a short distance in the bay, but it being nearly dark his direction was lost. These, with another that had been killed within an hour and three which were subsequently obtained, were all of less than two years of age, and averaged a weight of eighteen pounds.

The Swans never leave the open shores of the bay for the side streams, and the Geese rarely through the day, though they often retire to the little inlet to rest or feed at night. Few of these large game are found, after their regular settlement above Spanish Island, but on the flats in tangled masses of thornbushes a hundred, down the western shores, even as far as the Potomac. During a still night, a few Swans may often be seen asleep in the middle of the bay, surrounded by a group of far more watchful Geese, and the winter paddled at day-break one morning to within ten feet of an enormous sleeping Swan, who had probably depended for alarm on the wary Geese by which he had been surrounded, but which, as we approached, swam away. By an unforeseen occurrence, when a few seconds more would have enabled us to stun him by a blow, he became alarmed, and started in a direction that prevented a probable chance of killing, I ran out position and the tottering nature of the skiff."—*Audubon's Birds of America*.

## THE TRUMPETER SWAN.

*Cygnus Baccinator*; Richardson.

"Adult, 68; wing, 27; young, 52½, 91.

"Breeds from North Carolina, northward. Fur Countries. Moults during the winter on the Missouri, Mississippi, Ohio, and in Texas. Never seen eastward of South Carolina.

"Adult male:

"Bill longer than the head, higher than broad at the base,



depressed, and a little widened toward the end, rounded at the tip. Upper mandible with dorsal line sloping, the ridge very broad at the base, with a large depression, narrowed between the nostrils, convex toward the end, the ridge nearly erect at the base, gradually becoming more horizontal and convex toward the end, the sides soft and thin, with forty-two to twenty-five little elevated lamellae internally, the ungues obovate. Lower mandible narrow, flattened, with the angle very large, rather narrow, anteriorly rounded, the sides convex, the edges erect, inclinate, with about twenty-six external lamellae, and about seventy above, the ungues obovate-triangular. Dorsal groove elliptical, sub-dorsal, covered by the soft nuchal rind of the skin, nostrils sub-meshed, longitudinal, placed near the ridge, elliptical, pervious.

" Head of moderate size, oblong, compressed; neck extremely long and slender. Body very large, compact, depressed. Feet short, stout, placed a little behind the centre of the body; legs bare an inch and a half above the joint. Tarsus short, a little compressed, covered all round with annular scales, of which the posterior are extremely small. Hind toe extremely small, with a very narrow membrane, third toe longest fourth very little shorter, second considerably shorter. Internal toes covered with angular scales to nearly half the length—inclinate in the rest of their extent, and connected by broad reticulated entire membranes. Claws rather small, strong, stout, compressed, rather obtuse, that of the middle toe much larger, with a dilated thin edge.

" A portion of the forehead about half an inch in length, and the space intervening between the bill and eye are bare. Plumage dense, soft and elastic; on the head and neck the feathers oblong, acuminate, on the other parts in general, broadly ovate, rounded; on the back short and compact. Wings broad and long, the anterior prominence of the first plume very prominent, primaries curved, stiff, tapering to an obtuse point, the second longest, exceeding the first by half an inch, and the third by a quarter of an inch, secondaries very broad



and rounded, some of the inner rather pointed. Tail very short, graduated, of twenty-four stiffish, moderately broad, rather pointed feathers, of which the middle exceeds the lateral by two inches and a quarter.

" Bill and feet black, the outer lamellate edges of the lower mandible, and the inside of the mouth yellowish flesh-color. The plumage is pure white, excepting the upper part of the head, which varies from brownish-red to white, apparently without reference to age or sex, as in *Chytrus laetiorius* and later *Hypobrycon*.

" Length to end of tail, 65 inches; bill along the ridge,  $4\frac{5}{8}$ ; from the eye to the tip, 6; along the edge of the lower mandible,  $4\frac{1}{2}$ . Breadth of upper mandible near the base, 1—; near the end,  $1\frac{1}{8}$ ; wing from flexure, 27; tail, 8; tarsus,  $1\frac{1}{2}$ ; first toe,  $\frac{1}{2}$ —its claw,  $\frac{1}{2}$ ; second toe,  $1\frac{1}{2}$ —its claw, 1; third toe, 6—its claw,  $1\frac{1}{2}$ ; fourth toe,  $5\frac{1}{2}$ —its claw,  $\frac{1}{2}$ .

" Young after the first month:

" In winter the young has the bill black, with the middle portion of the ridge to the length of an inch and a half, light flesh-color, and a large elongated patch of light dull purple on each side; the edge of the lower mandible and the tongue dull yellowish flesh-color; the eye is a dark brown. The feet dull yellowish-brown tinged with olive, the claws brownish-black, the webs blackish-brown. The upper part of the head and cheeks are light reddish-brown, each feather having toward its extremity a small oblong, whitish spot, narrowly margined with dusky; the throat nearly white, as well as the edge of the lower eyelid. The general color of the other parts is grayish-white, slightly tinged with yellow; the upper part of the neck marked with spots similar to those on the head.

" Length to end of tail, 52½ inches, extent of wings, 91, wing from flexure, 23½; bill along the ridge, 4½; from the angle of the eye, 6; along the edge of the lower mandible, 4½; tarsus, 1½; hind toe, 1½—its claw, ½; middle toe, 6½—its claw, 1; inner toe, 4½—its claw, ½; outer toe, 6½—its claw, ¾; weight, 19 lbs. 8 oz. The bird was very poor.



"The Trumpeter Swans make their appearance on the lower portions of the waters of the Ohio, about the end of October. They throw themselves at once into the larger ponds, or lakes, at no great distance from the river, giving a marked preference to those which are closely surrounded by dense reeds and brakes, and there remain until the water is closed by the ice, when they are forced to proceed southward. During cold winter I have seen Swans of this species in the ponds about Henderson until the beginning of March, but only a few individuals, which may have staid there to recover from their wounds. When the cold becomes intense, most of those which visited the Ohio would remove to the Mississippi, and proceed down that stream, as the severity of the weather increased, or return if diminished. For it has appeared to me that neither very intense cold, nor great heat, suit them so much as a medium temperature. I have traced the winter migrations of this species so far southward as Texas, where it is abundant at times.

"At New Orleans, where I made a drawing of the young bird here described, the Trumpeter is frequently exposed for sale in the markets, being procured on the ponds of the Mississippi, and on the great lakes leading to the waters of the Gulf of Mexico. This species is unknown to my friend, the Rev. John Bachman, who, during a residence of twenty years in South Carolina, never saw or heard of one of those, whereas in hard winters the *Cygnus leucurus* is a common sight, although it does not often proceed farther southward than that State. The waters of the Arkansas and its tributaries, are annually supplied with Trumpeter Swans, and the largest individual which I have examined, was shot on a lake near the junction of that river with the Mississippi. It measured nearly ten feet in adult extent, and weighed above thirty-eight pounds.

"The flight of the Trumpeter Swan is firm, at times greatly elevated and sustained. It passes through the air by regular beats, in the same manner as Geese, the neck stretched to its full length, as are the feet, which project beyond the tail. When passing low, I have frequently thought that I heard a rustling



sound from the motion of the feathers of their wings. If bound to a distant place, they turn themselves in angular lines, and probably the leader of the flock is one of the oldest of the males, but of this I am not at all sure, as I have seen at the head of the line a gray bird, which must have been a young one of that year.

"This Swan feeds principally by partially immersing the body, and extending the neck under water, in the manner of fresh water Duck, and some species of Geese, when the bird are often seen working as they are, as if by aid in preserving the balance. Often, however, it resembles the land, and there picks at the forage, not—always is this so, but more in the manner of Ducks and poultry. Its food consists of roots of different vegetables, leaves, seeds, various aquatic insects, land snails, and reptiles, and quadrupeds. The flesh of a Cygnus is pretty good eating, but that of an old bird is dry and tough.

"Dr. Richardson informs us, that it "is the most common Swan in the interior of the fur countries. It breeds as far South as latitude 41°, but principally within the Arctic Circle; it provisions the Goose a few days in its migration."—*Audubon's Birds of America*.

## WILD GEESE.

### THE CANADA GOOSE.

*Anas Canadensis*, Wilson. *Anser Canadensis*; Bon, Syc. *Anser Canadensis*; No 3. Rich. P. Bon *Anser*.—Vulgo, *The Wild Goose*.

"Male, 43.65. Female, 41.

"Breeds sparingly from the Mississippi to Nova Scotia, abundantly in Labrador, and farther North. In the interior on the Missouri, and across to the Columbia River, abundant. Migrates in winter."—*Audubon's Birds of America*.



"*Specific Character*—Length of bill from the corner of the mouth to the end two inches and three sixteenths; length of tarsus two inches and seven eighths; length from the point of the bill to the end of tail about forty inches; wings sixteen; the head and greater portion of the neck black; cheeks and throat white. Adult with the head, greater part of the neck, primaries, rump and tail black; back and wings brown, margined with paler brown; lower part of the neck and under plumage whitish-gray; flanks darker gray; cheeks and throat white, as are the upper and under tail coverts. The plumage of the female rather duller.

"Late in autumn, especially when the wind is from the north-east, the Canada Geese are seen in our section of country, sailing high in the air, making their accustomed tour at that season. Impelled by nature, they seek their northern abode, and have not in escape from the attacks of man, as yet than perish amid the icy currents of the frozen regions. When migrating many flocks unite and form a solid column, each bird having its chosen leader. They generally continue flying during the night, but occasionally alight on land in the day. Before doing so, however, their experienced primaries give the signal down, and select a place favorable for food and stay. Scouting is then appointed from among the prominent ones, and the alarm should an enemy appear. I have seen them adopt the same precaution when sailing in large flocks by day. Those separate from the main body would move about with heads erect, ready to catch the first sign of intrusion; and after strutting their best they would return to the main body, their places being immediately supplied by others. I have often been disappointed by such a movement, supposing it to be a signal for flight, looked well to my gun, but after waiting a few moments in suspense, discovered it to be merely a change of guard.

"The hoarse, honking of the gander is so familiar to the inhabitants of our country, that it is impossible for them to startle among us without making their visit known. All welcome their return; the once keen eye of the aged gunner again sparkles



as he beholds their grand and long flight. The flock, that useful piece of furniture which ornaments all our farm-houses, is immediately brought into requisition, and the village store-keeper is industriously employed in answering the demand for 'single B's.' The report of guns reverberates through the country, but still these sagacious birds keep on their steady course; occasionally a single feather may be seen slowly descending to the earth, as if to inform the eager gunner of their nicely-calculated distance; or perchance after the loud report of some well-mettled piece, a single bird may be seen leaving the flock, its death-knell sounded by its more fortunate, but terrified companions.

"But not so with the practised bay-gunner. On the return of the Geese his prospects brighten; he looks upon them as debtors returned to cancel a long-standing obligation; he wastes not his ammunition on spare; he has watched their flight, and discovered their favorite landing place; the long neglected decoys are placed in his skiff, and before daylight has appeared, he is pulling his way across the rough bay with glorious anticipations of profit. On gaining the desired point, he puts out his decoys, sinks a box in the sand, and there lies concealed. As they approach, his keen eye glances quickly over his trusty gun, and ere a moment elapses death is among them.

"When wounded, they have the power of sinking themselves in the water, leaving their bill out. In this situation they will remain a considerable length of time. The dead body of a Goose, when lying on the water, will float two-thirds out. In stormy weather they fly low; when it is very foggy, they frequently become confused, and alight on the ground.

"The Canada Geese remain with us until our bays are frozen, and return with the disappearance of ice in the spring: at this season their stay is short. Early in April they collect in large flocks, and almost simultaneously move off. Their food consists of sedge roots, marine plants, berries, and herbage of most kinds. In winter they are common on the lakes in the neighborhood of the lower Mississippi, where I was informed by the



inhabitants than a few stragglers remain with them during sunset.

\* This species is not the origin of the *Thouya* (Gibber) which by some supposed the synonymy of which it used to be treated before Hamilton's *For. Knappe's illustrated forest of Long Island*.

† This is the common Wild Goose of our Eastern States, universally known over the whole country, whose regular, periodical migrations are the sure signs of returning process or impending winter. The flocks of the vast migratory swarms are not confined to the mountain or its vicinity. In the entire passage to and from the North these winged pilgrims pass over the mountain on both sides of the mountains, as the West at least as the Ohio River, and I have never yet traced any quarter of the country where the indications are not to be met, as pointed with the signs of passing and repassing of Wild Geese. The general opinion here is, that they go on the way to the Lakes to breed, but the indications on the coast of the coast show that separate or from Canada, and groups are sent northward, some of the parties direct to the ponds of Lake Erie. From the journey North is that common, and now it extends it is impossible for a spot passed to be that frequent, and are sometimes with them to be in great numbers. They were very many in the fall, when the water was in the water, and then pursuing their way still farther North. Certain Pigeons species of young Wild Geese feeding at the water edge and extraordinary coast of Spotsylvania, in the fall, 1871. It is not by passing that they extend their migrations under the very Pole itself, and the silent descent of unknown countries shut out since creation to the pilgrims of humanity, overhauling and insuperable barriers of ice. That such places abound with such a host, remained for moment doubt, when the absence of the great destroyer, rain, and the splendor of a perpetual day. Moreover, such regions the most suitable for their purposes. Having

\* Not so the *Thouya* from, but to the latter, commonly known as the Wild Goose—*Felis sanguis*.



fulfilled the great law of nature, the approaching rigor of that dreary climate oblige these vast congregated flocks to steer for the most genial regions of the South. And as soon do they arrive at those countries of the south, it is but by man, than carnage and slaughter is commenced on two wings. The English at Hudson's Bay—says Pennant—depend greatly on Geese, and in favorable years kill three or four thousand, and fatten them upon ice. They send out their servants, as well as Indians, to shoot these birds on their passage. It is not vain to pursue them; they therefore form a row of huts, made of boughs, at market shot distance from each other, and place them in a line across the vast wastes of the country. Each stand of fowl, so it is called, is occupied by a single person. These attend the flight of the fowls, and on their approach, name them as he so well, that the Geese will answer, and wheel and come nearer the stand. The hunter keeps motionless, and on his knees, with his gun cocked, the whole time, and never fires until he has seen the eyes of the Geese. He fires as they are going from him, then picks up another gun that lies by him, and discharges that. The Geese which he has killed, he sets upon sticks, as if alive, to decoy others; he also makes artificial bands for the same purpose. In a good day, for they fly in very uncertain and unequal numbers, a single Indian will kill two hundred. Notwithstanding every species of Geese has a different call, yet the Indians are admirable in the imitations of every one. The autumnal flight lasts from the middle of August, to the middle of October. Those which are taken in this season, when the frosts begin, are preserved in their feathers, and left to be frozen, for the fresh provisions of the winter stock. The feathers constitute an article of commerce, and are sent to England. The vernal flight of these Geese lasts from the middle of April until the middle of May. Their first appearance coincides with the thawing of the swamps, when they are very lean. Their arrival from the South is impatiently awaited, and is the harbinger of the spring, and the month named by the Indians the Geese Moon. They appear usually at their settle-



ments about St. George's Bay, O. S., and the northward to meet the necessity. They preferred not to be caught, as far as from the hands of man. After our persistent hunting, this appears to be made among these birds, and the turning the gunshot, if I may so speak, for many hundreds of miles through such destructive fires, no wonder they stay, if not because most water, as well as dry, by the time they reach the shores of the United States.

\* They first arrived on the coast of New Jersey, nearly in October, and then lost numerous appearances, as the same passage of severe weather. These birds continue all winter, frequent the shallow bays and marsh islands, the principal food being the broad-leaved *Utricularia*, leaves of a marine plant, which grows on stones and shells, and is usually called *sea bladders*, and also the roots of the sedges, which they are frequently observed to be in the act of tearing up. They fly slowly, they make an excursion to the inland on the morning after a fog, cross the distance over land or water, generally toward the coast, enroute to their object, differing in their proportion, the flight, which will often go a great way toward the water rather than cross on the land. They swim well, but if wing broke, dive and go a long way, and I note, however, they spend much time, and deal of fatigue, before they reach the shore. Except in very calm weather, they rarely skip on the water, but rest on the marshes. When the shallow bays are frozen, they seek the mouth of inland rivers, the same way, and continue the numbers in the sea, but these bays are seldom so completely frozen, as to prevent them from feeding on the shores.

\* The flight of the Wild Geese is heavy and laborious, generally in a straight line, or in two lines approximating to a point, thus, as in both cases, the can be led by an old bird, who examines and then pushes his well-known *lead*, and nearly how they come on, and the *lead* of the well-known *lead* is returning to the same point. Their course is in a straight line, with the exception of the undulations of the flight. When viewed in foggy weather, they appear sometimes to be in great



distress, flying about in an irregular manner, and for a considerable time, over the same quarter, making a great clamor. On these occasions, should they approach the earth, and alight, which they sometimes do, to rest and to collect themselves, the only help they may meet with, is death, and a removal from a whole neighborhood, already in arms for their ruin. Wounded Geese have, in numerous instances, been completely domesticated, and readily pair with the tame Gray Geese. The offspring are said to be larger than either, but the characteristic mark of the Wild Geese still predominate. The gunners on the seasons here, have long been in the practice of taming the wounded of both sexes, and have sometimes succeeded in getting them to pair and produce. The wing always seeks out the most solitary place for her nest, not far from the water. On the approach of every spring, however, these birds discover symptoms of great uneasiness, frequently looking up into the air, and attempting to go off. Some whose wings have been closely cut, have travelled on foot in a northern direction, and have been found at the distance of several miles from home. They hail every flock that passes overhead, and the salute is sure to be returned by the voyagers, who are only prevented from alighting among them by the presence and habits of man. The gunners take one or two of these domesticated Geese with them, to those parts of the marshes, in which the wild ones are accustomed to fly, and concealing themselves with a gun-shot, wait for a flight, which is no sooner perceived by the docile Geese, than they begin calling aloud, until the whole flock approaches so near as to give them an opportunity of discharging a two, and sometimes three, headed musket among them, by which great havoc is made.

The Wild Geese, when in good order, weighs from ten to twelve, and sometimes fourteen pounds. They are sold in the Philadelphia markets at from seventy five cents to one dollar each, and are estimated to yield half a pound of feathers apiece, which produces twenty five or thirty cents more. The Canada Goose is now domesticated in some few quarters of the country,



and remarked for being extremely sensible, and more sensible of approaching changes in the atmosphere, than the common Irish farmer. In England, France, and Germany, they have also been long and domesticated. But such a domestication has been, however, that Vipers have been introduced to Germany with the Swallow, and were sold, at the same time, as being without venom and mild. I have not perceived any traces of them in the mountain forest birds that descend into the human habitations of Chantilly. There has America already adopted the practice of domesticating birds, thus species, the Turkey and the Carolina Parakeet. The strong disposition of the mounted Whites to migrate to the South in winter, has been already taken notice of. The same may be observed, where the wounded have fled, and they have actually succeeded in introducing into the large regions of the air and pushing a passing party to the North, and extraordinary as it may appear, I am much amused by the testimony of several respectable persons, who have been conversant with the fact, that they have observed many thousands of them in the summer months, but that they have not been able to find any of them in the winter. I was strongly confirmed by another witness, I was once conversed with in an obliging and penetrating New York man, who I shall have occasion to quote, from his knowledge of the fact, that he has seen at large, from time to time, and in his own way, and rarely, by any other means, of the same species.

Mr. Pratt, a respectable citizen of Long Beach, Cal., and shooting sports of the large and healthy part of community abundant with water-fowl, were at a Woodcock. The cock, tipped, and unable to fly, he caught it, and brought it home. It proved to be a female, and turning it into a yard with a flock of tame doves, it soon became quite domesticated and, and in a little time its unsuspiciousness entirely known. In the following spring, when the Wild Geese migrate to the northward, a flock passed over Mr. Pratt's vineyard, and just at the moment their leader happened to sound the large note, as if to say, in whom its new habits and captivity had not quite extinguished the love of liberty, and remembering the well-known sound, spread its wings, inquired of the doves, and the



travellers, and soon disappeared. In the succeeding autumn, the Wild Geese, as we call them, returned from the northward in great numbers, to pursue their migratory and roving life. Mr. Platt happening then to be in the country, a flock passed directly over his farm. At that instant he observed, these Geese detach themselves from the flock, and come within several times, alighted in the meadow in front of his house, in surprise and pleasure, when, by some well remembered signs, he recognized in one of these birds, Maria, his long lost daughter. It was she, indeed, she had travelled many hundred miles to the lakes—but then Maria had been long separated, and had now returned with her better fortune, to resume the same old civilized life. The truth of the foregoing relation can be attested by many respectable people, to whom Mr. Platt has related the circumstances, as above detailed. "The birds were all young, and in his possession about a year ago, and had shown no disposition whatever to leave him." — *Waller's American Ornithology*.

### HUTCHINS' GOOSE.

*Anser Hutchinsii*, *Hutchins' Pintail Goose*, *Sax. & Rock*, *Hutchins' Goose*, *Anser Hutchinsii*; *And. Gen. Qu.*

"*Specific Character*—Bill from the corner of the mouth to the end, one inch and nine-sixteenths; length of tarsus, two inches and seven-sixteenths; head and upper part of the neck black; cheeks white. Adult with the bill black; head and upper part of the neck glossy black; a white patch on the sides of the head and neck, similar to that of *thimbleback*; upper parts brownish-grey; the feathers are mixed with pale; lower parts pale greyish brown, margined with yellowish-brown; abdomen and lower tail coverts white; tail of sixteen feathers, of a deep brown color, as are the primary quills; feet and claws black. Length twenty-seven inches, wing sixteen.

"At the eastern extremity of Long Island, this species is not



uncommon. At Mankak it is known by the name of 'Mud Goose' and is frequently observed in company with the greater part of the species to which it belongs. In its habits and plumage, it bears a strong resemblance to the *Colymbus* but through having been first found exceeding all others in size, it was named having the white patch on the neck of the great similar to the Canada Goose.

On the south bank of Long Island, and near some other gunners, though I have not shot it, it is frequently procured, and from the same individuals, it bears the general markings to the double line, as seen in a variety of other species. Although sometimes taken known to be quite identical with that of Mexico, as at the vicinity of Koon, and it has been shot on the *Chrysocoke*.

The Richardson state that *S. p. 96* was taken at Haines Bay, and that it is always found in the warm, leading, or inner part, and the male *S. p. 97* was taken at the same place, where it always is found, in strong tide, near the shore of *Barrow Bay Island*.

## REENT CODES

$$\text{Proof. Assume } B_{\text{max}}(t) = W = 1 \text{ for } t \in [0, 1]. \text{ Then } P_{\text{max}}(t) = 1 \text{ for } t \in [0, 1] \text{ and } P_{\text{min}}(t) = 0 \text{ for } t \in [0, 1]. \text{ Then } \lambda = 0 \text{ for } t \in [0, 1] \text{ and } P_{\text{min}}(t) = 0 \text{ for } t \in [0, 1]. \text{ Then } \lambda = 0 \text{ for } t \in [0, 1] \text{ and } P_{\text{min}}(t) = 0 \text{ for } t \in [0, 1].$$

\* *Sporoph. rubra* (Sw.) Raf. (Sw.) Small and somewhat rounded black, rounded on the sides of the neck with upper part brownish gray and the narrow dorsal body grayish brown; quills and pen on a white gray band, the upper part of the r. high brown, gray and white, brownish gray, the lower half grayish white and brown, the lower half grayish white, the gray the feathers rather broad, spread out, some brown, two feet, wing fifteen inches, tail four, feet, four, four, smaller.

"The first time we had a 'bad' day, we were called, makes us a person, and we are a person of



October. Mr. Audubon found it breeding at Labrador, but was prevented from securing its eggs in consequence of the great depth of the moss on which it was nesting.

"In the spring and autumn it is very numerous on our coast, exceeding in number the Canada Geese and Dusky Ducks. Its manner of flying is different from that of the Canada Geese—moving in more compact bodies, less rapidly, and without seeming to have a chosen leader—that marked characteristic in the flight of the latter. While on our bays it appears inactive, seldom taking to wing unless disturbed by a passing boat or the near report of a gun.

"The Brent rise slowly, and when on the wing, moves sluggishly for a short distance, and if not attracted by a distant flock, frequently returns to the place it had left. Its food consists of marine plants—*Zostera maritima*—commonly called 'eel-grass.' At low water it is seen industriously at work, tearing up its favorite plant. After the tide has risen to such a height as compelled it to relinquish its occupation, it is seen drifting with the current, feeding sumptuously on the fruits of its labor.

"I have examined a number of these birds, and in no instance have I found fish in them.

"The Brent these are very fond of sanding, and resort to the bars for that purpose, at which places they are killed in great numbers by the gunners who devote themselves in excursions made in the sand. The bar known as 'Five Island Bay' on the south side of Long Island, is a celebrated place for procuring them. It is included in the Noy's Patent, and retails for two bushels by the name of 'Middy' at \$120 per annum. I was informed that these are sold to the New York market, annually several hundred dollars' worth of birds, the larger proportion of which is Brent.

"These quiescent, when passing over our bays, avoids as much as possible the 'points' and 'knocks,'\* which makes it very diffi-

\* "Knock," "knock," or "knick," local term used by gunners, signifying large tussocks of tall grass that occur on the bays."



cult to be obtained, unless practiced in the manner just mentioned, and yachting from the batteries is limited in the shallow part of the bay. These batteries are constructed in the following manner—by making a box, six feet long, two feet and a half wide, one foot deep, with the ends and sides covered with such small splashed board as will serve as to prevent the entry of the water, and covered so that its appearance above may be almost even with the surface of the water. The entrance, by a trap in the box on the bow, is perfectly concealed, and having a large number of drags around the battery, the reception is so perfect, that the birds often appear less wary, as to give them an opportunity of discharging with effect two double-barreled guns into a flock. Great havoc is made in this way, particularly among young birds. The mode of shooting requires two persons, one to stand from the battery, the other to attend with a boat to collect the dead birds, and to keep drags sailing on the bay. It is, I believe, objected to by some, that supposing it to be too destructive, as well as the waste of carrying from the bay those which escape. The first objection is without merit, as before mentioned, fewer than a few birds are ever so shot any one instance, which induces many to suppose that they have a right to secure them in any case, and they are safe.

"In 1835 a law was passed in this State, in relation to the use of batteries. For some time I was reported that the gunners who depend on water for a means of collecting part of their living, considered much as we do, and were not so right, and they defied it, and shot shooting with muskets, and some time threatening to use the infernal shotguns to destroy. They finally, however, did not make good their own intentions, and after a few more have reported. A few more reports of being fired boats, were sailing on their trading grounds. After having been shot at many ways, I have seen them over high in the air, and far in the sea. I think it would be small if the gunners generally would agree to abandon this objectionable practice.

"The Brand never dives for its food; but when wounded, it



is not unusual for it to attempt escape by diving. As it seldom passes thirty or forty yards under water, it is generally secured. With the lovers of water-fowl the Brant is highly esteemed. Even the adult birds are tender and juicy, and free from a fishy flavor, but at times, from the nature of its food, it is fleshed with a wisgy note. It is considered superior for the table late in the spring. The sportsman well knows the merits of the "May Brant."

"In the plumage, there are no markings by which the sex can be distinguished. Many undertake to determine it by the white markings on the sides of the neck, supposing that character to be more fully developed in the male of the race, but this cannot be depended upon. I have frequently selected them by this supposed distinction, and on dissection the male and female organs have appeared without reference to such character.

"Their unwillingness to give up their wandering habits, makes it difficult to domesticate them. I have frequently tried it with young birds, having taken the precaution to cut off a joint from one of their wings, thus rendering them incapable of flying; still they would wander to the creeks that lead to the bay, and doubtless have fallen easy game to some passing sportsman. With a good deal of attention, particularly when associated with Canada Geese that have been domesticated, its native propensities are more easily subdued; but in the domestic state they have never been known to breed.

"The average weight of the Brant is four pounds. The adult can be distinguished to a certainty from the young, by its immatures which are entirely black, while those of the latter are broadly tipped with white. As soon as the ice begins to form in our bays, it retires southward. Returning in April, it continues its visit until late in May, when they assemble at the 'great nursery' in the North"—*Clarendon's Birds of Long Island*.

"The Brant, or as it is usually written, Brant, is a bird well known on both continents, and celebrated in former times,



[illegible]

The Bristle-necked Grebe (*Podiceps cornutus*) is one of the two different species of grebe occurring in the State. Among these larger grebes that arrive on our coast about the beginning of October, individuals frequently occur corresponding in their markings with that called the Bristle-neck of Europe, that is to say, the upper parts lighter and the throat, cheeks, and chin whitish. These appear evidently a variety of the Bristle-necked, probably young birds. What strengthens this supposition is the fact, that some of them are found so marked on their return northward in the spring. The Bristle-neck is reported at Egg Harbor, on the coast of New Jersey, about the first of October, and has been sometimes seen as early as the twentieth of September.



The first flocks generally remain in the bay a few days, and then pass on to the South. On recommencing their journey, they collect in very large bodas, and making an extensive spiral course of some miles in diameter, rise to a great height in the air, and then steer for the sea, over which they uniformly travel, often making wide circles to avoid passing over a projecting point of land. In these aerial routes, they have been met with many leagues from shore, travelling the whole night. Their line of march very much resembles that of the Canada Goose, with this exception, that frequently three or four are crammed together in the front, as if striving for pre-eminence. Flocks continue to arrive from the North, and many remain in the bay till December, or until the weather becomes very severe, when these pass more or less southerly. During their stay they feed on the bays at low water, seldom or never on the mud-flats; their principal food being a remarkably long and broad-leaved marine plant of a bright green color, which adheres to stones, and is called by the country-people *stacheldagge*; the leaves of this are sometimes eight or ten inches broad by two or three feet in length; they also eat small shell-fish. They never dive, but wade about, feeding at low water. During the time of high water, they float in the bay in long lines, particularly in calm weather. Their voice is hoarse and lowing, and when some hundreds are screaming together, reminds one of a pack of hounds in full cry. They often quarrel among themselves, and with the Ducks, driving the latter off their feeding ground. Though it never dives in search of food, yet when wing-broke the Brant will go one hundred yards under water at a stroke, and is considered, under such circumstances, one of the most difficult birds to kill.

About the 15th or 20th of May they reappear on the bay North, but seldom stop long unless driven in by tempestuous weather. The breeding place of the Brant is supposed to be very far to the North. They are common at Hudson's Bay, very numerous in winter on the coasts of Holland and Ireland, and called in Shetland *Harra-Geese*, from their frequenting the



kind of that name; they also visit the coast of England. Buffon relates that in the severe winters of 1540 and 1558, during the prevalence of a strong north wind, the Brant visited the coast of Picardy and France, in prodigious numbers, and committed great depredations on the corn, tearing it up by the roots, trampling and decimating it, and notwithstanding the exertions of the inhabitants, who were constantly employed in destroying them, they continued in great force until a change of weather carried them off."—*Wilson's American Ornithology*.

## THE WHITE-FRONTED GOOSE.

*Anas Albifrons; Pomor. Sga. Anser Albifrons, Longbang Goose;  
Sw. & Hol. White-fronted Swan. Anser Alba.*

"*Species Character.*—Head and neck grayish brown, at the base of the upper mandible a white band. Adult with the bill carmine red, with the ungues white. Head and neck grayish brown, a white band, more or less bordered with blackish brown, on the anterior part of the forehead. Along the back several colored back, deep gray, the feathers of its base part usually tipped with grayish brown—the rest with grayish white. Last part of back deep gray, white greenish brown toward the edge, ash gray—as are the primary coverts, and outer webs of the primaries—the rest of the primaries ochraceous, grayish black, the latter with a narrow edge of grayish white—the former edged and tipped with white. Breast, abdomen lower tail coverts, sides of rump, and upper tail coverts, white; the breast and sides patched with brownish black—on the latter intermixed with grayish brown feathers, tail rounded, feet orange, claws white—length, twenty-seven and a half inches, wing fourteen and a half inches.

"On the coast of Long Island, this Goose is exceedingly rare. The cabinet of the Lyceum of Natural History, New York, contains a specimen that was shot at Babylon. Accord-



ing to Mr. Audubon, "it passes through the interior of the Southern and Western States during winter, as well as along the coast from Massachusetts to Texas, and is said to pass through the interior of the two eastern Indian fields to its breeding places, which are the woody districts to the north of the seventy-seventh parallel, and to the islands of the Arctic Sea."—*Giraud's Birds of Long Island*.

### THE SNOW GOOSE.

*Ans. Hyperboreus*, *Wils.* *Ans. Hyperboreus*, *Penn.* *Snow Goose*, *Nuttall* *Ans. Hyperboreus*, *Snow Goose*, *See A. B. C.*

"*Scaly*. *Chassidus* white and feet carmine, plumage pure white, fore part of head tinged with yellow, and primaries brownish gray—toward the end blackish brown. Length thirty-one inches and three quarters, wing fifteen. Female measures about six inches less. Young with the head and upper part of the neck and wing coverts, greenish white, lower part of neck, fore part of back, fore part of breast and sides blackish gray, hind part of back, and upper tail coverts, ash-gray, abdomen grayish white—around eyes margined with the same; bill flesh-color.

"With us the occurrence of this bird is not frequent. Occasionally the young are seen exposed for sale in the New York markets, though rarely the adult. In some seasons, small parties are seen on the South Bay, and now and then stragglers are confided in company with the Canada Goose. The plumage of their plumage can be seen very conspicuous, and when opportunity offers, are always singled out by the summer.

"The Snow Goose breeds in the barren grounds of Arctic America in great numbers. It feeds on berries and insects, and in autumn on corn. When well fed, it is a very excellent bird—far superior to the Canada Goose, both in plumage and flavor.

"The Snow Geese make their appearance in spring, a few







place at the North, about the first of November, and during winter extends to the southern portion of the seacoast of the United States. It is not unfrequently shot in the eastern part of the Great South Bay, and I have known it to be captured in Long Island Sound. The majority, however, congregate on the Potomac and Delaware rivers. Those procured in the vicinity of New York, are inferior to those obtained on the tributaries of the Chesapeake, owing to the difference in the quality of its food. The Canvas-back feeds chiefly on the *Zostera rubicunda*,—commonly termed 'tape or red-grass,' and by some improperly called wild celery,—which takes no growth in brackish water. We do not wish this plant to be confounded with the 'tape or red-grass,' *Zostera marina*, which furnishes food for the Brent Goose. When its favorite food cannot be obtained, it feeds on various marine plants and small shell-fish that abound on our coast, which furnish an abundant supply of food to many species of inferior water. When the *rubicunda* cannot be obtained, its flesh loses, in a great measure, that delicacy of flavor, for which it is so justly celebrated. Like most other species, it is in the best condition for the table during the latter part of autumn.

"Miller's Island, about fifteen miles from Baltimore, is a famous place for shooting Canvas-backs, as well as other species of Ducks. 'Points' on this Island, and others in the vicinity, are rented for large sums by parties who practise Duck-shooting. In this section 'divers' are not used, and the unsportsmanlike manner of suling after and harassing them on their feeding grounds, is not resorted to."—*General's Birds of Long Island*.

"This celebrated American species, as far as can be judged from the best figures and descriptions of foreign birds, is altogether unknown in Europe. It approaches nearest to the Pochard of England—*nas. fereus*—but differs from that bird in being superior in size and weight, in the greater magnitude of its bill, and the general whiteness of its plumage. A short comparison of the two will elucidate this point. The Canvas-back



measures two feet in length by three feet in extent, and when in the best order, weighs three pounds, and more. The Peckard, according to Latham and Bewick, measures about 18 inches in length, and thirty in extent, and weighs one pound twelve or fifteen ounces. The latter writer, as the Peckard, "the plumage above and below brown, except on the throat, feet, and under side of the bill, dusky, the iris deep chestnut, and the claws, upper line of the gape, and the lower jaw, less shaded off with ash, a description not far removed from the standard Red-head, the Red-head, and which very properly is the species meant. In the figure of the Peckard, given by Mr. Bewick, who is generally correct, the bill agrees very well with that of our Red-head, but is only half the size, and the knees of that of the Chamaea-like, and the figure of the *phalaropus lobatus*, corresponds in that respect with Bewick. In short, both of these writers are egregiously erroneous in their figures and descriptions, on the present Duck's subject, so that, considering the latter's opportunity to make perfect knowledge of the fact, I have designated this, as a species, and distinguished by some particulars of its history.

The Chamaea-like Duck arrives in the United States from the North about the middle of October, and is distributed to the Hudson and Delaware, and thence to both extensive harbours, to the numerous rivers, and to the smaller creeks, as the Chesapeake Bay, particularly the Susquehanna, the Patuxent, Potomac, and James Rivers, much prior to the general winter migration. Beyond to the South I can find no certain accounts of them. At the Susquehanna they are called Chamae-like, on the Potomac White-locks, and on James River, Shell-shakes. They are seldom found at a great distance up any of these rivers, or even in the salt water bay, but in that particular part of tide-water where a certain grass-like plant grows, on the roots of which they feed. This plant, which is said to be a species of *caulacoma*, grows on fresh-water swamps of from seven to nine feet, (but never where these swamps are usually dry,) in long, narrow, grass-like blades of four or five feet



in length; the rest is white, and has some brown tinge to small extent. This grass is in many places so thick that a boat can with difficulty be rowed through it, it so impedes the oars. The shore is covered with large quantities of it, torn up by the Ducks, and dried up by the wind, lying over hay in narrow. Wherever this plant grows in abundance, the *Chloroscypha* may be expected either to pay it occasional visits, or to make them its regular residence during the winter. It occurs in some parts of the Hudson, in the Delaware, near Gloucester, a few miles from Philadelphia, and in most of the rivers that fall into the Chesapeake, some of which particularly places the Ducks resort, while in waters unfavour'd with this nutritive plant, they are altogether unknown. On the first arrival of these birds in the Susquehanna, near Havre de Grace, they are generally lean, but such is the abundance of their favorite food, that towards the beginning of November, they are in pretty good condition. They are excellent divers, and swim with great speed and agility. They sometimes assemble in such multitudes, as to cover several leagues of the river, and when they rise suddenly, produce a noise resembling thunder. They do not about these shoals, diving and tearing up the grass by the roots, which is the only part they eat. They are extremely shy, and can rarely be approached unless by stratagem. When wounded in the wing, they dive to such prodigious distances, and with such rapidity, continuing it so perseveringly, and with such cunning, and active vigour, as almost always to render the pursuit hopeless. From the great demand of these Ducks, and the high price they uniformly bring in market, various modes are practised to get within gun-shot of them. The most successful way is said to be charging them to the shore by means of a dog, while the gunner lies closely concealed in a proper situation. The dogs, if properly trained, play backwards and forwards about the margin of the water, and the Ducks observing his manœuvres, enticed perhaps by curiosity, gradually approach the shore, until they are sometimes within twenty or thirty yards of the spot where the gunner lies concealed, from which he takes them, first on the water and then







stood upon the ice around it. They had three firings, both at once, and picked up eighty-eight Canada ducks, and might have collected more, had they been able to get to the extremity of the ice after the wounded ones. In the same winter of 1845-50, the gales, on the rivers of which these birds breed, was almost wholly destroyed in June & July. In the month of January, the wind continued to blow from a w. w. for twenty-one days, which caused such low tides in the river, that the grass grew to the ice everywhere, and other coming on suddenly, the whole was raised by the roots and carried off by the frost. The next winter a few of these Ducks were seen, but they soon went away again, and for many years after, they continued to be scarce, and even to the present day, in the opinion of our informant, have never been so plenty as before.

The Canada duck, in the rich, pure tenderness of its flesh, and its delicacy of flavor, is well supplied by the whole of its tribe in this or perhaps any other quarter of the world. These killed in the waters of the Chesapeake are generally so much superior to all others, doubtless from the constant abundance of their favorite food which these rivers produce. At all our public dinners, hotels, and particular entertainments, the Canada ducks are universal favorites. They not only grace but dignify the table, and the very name conveys to the imagination the eager appetite, the most comfortable and exhilarating ideas. Hence on such occasions, it has not been uncommon to pay them more than double a price for these Ducks, and indeed, it is such, if they can, they must be had, whatever the price.

The Canada duck will breed readily on grass, especially if wet, and may be observed to put up its place by beating the water open for several successive days. Some few years ago, a small pond well stocked, was enclosed near the entrance of the Egg Harbor, a tree was planted over the pond, and the ducks, not in the least alarmed, and the whole surface of the pond was covered with them. Ducks, of all kind also gather round the ponds of that quarter. The gunners of the neighborhood collected in boats in every direction, shooting



them, and so much of it went to the fact that, as Mr. Gossely informs me, two hundred and forty were killed in one day, and sold among the very best of twelve hundred ducks a piece, without the feathers. These wounded birds were given for food, instead of being too difficult to be run up with. They continued about for three weeks, and during every part of that time a constant excitement was maintained in the quarters. The owners sold them for small prices. They were all of the same stock, and first seen on their way to the North, when the shooting least attracted their attention, and for a while arrested them in their course. A part of these very ducks I used to shoot in the Philadelphia tract at the time from our large Haver's gun, and never met with their superior either in weight or excellence of flesh. When it was known among these people the day they had sustained, in selling for twenty five cents what would have brought them from a dollar to a dollar and a half per pair, universal surprise and regret were naturally enough excited. — *Hesperian, American Mythology.*

## RED-HEADED DUCK.

*Red-headed Duck, Amer. Form.* — *H. v. Pinnip. Perina.* — *S. & A. Duck, Red-headed Duck, or Pinnip.* — *Nature.* — *Red-headed Duck, Fuligula Perina; Audubon.*

"*Species Character.* — Red-buck toward the end black, but about two inches red a quarter long, makes yellowish-red. Adult male with the head erect, rather large, and the upper part of the neck all round dark reddish-chestnut brightest on the lower neck. Lower portion the neck, extending to the back, and upper part of the breast black, abdomen white, darker toward the vent, where it is bordered with undulating lines of dusky, flanks gray, closely barred with black, scapulars the same, primaries brownish-gray, secondaries lighter. Tarsus grayish brown, lined with fine lines of white. Lower and upper tailcoverts blackish-brown, tail feathers orange-brown, glaucous



at the base; lower tail coverts brownish black, rather lighter than the upper. Length twenty inches wing nine and a half. Female about two inches smaller, with the head, neck, breast, and general color of the upper parts brown, darker on the upper part of the head, lighter on the back, bill, legs, and feet similar to those of the male.

"With us the Red-headed Duck is not as common as many other species, and is seldom seen in numbers west of Bingham, being chiefly confined to the eastern part of the South Bay, where it is sometimes seen in company with the Canvas-back, feeding on the stems of the same plant, the latter part using the roots, being more tender and juicy, which accounts for its being a delicate fowl. The Red-headed Duck is also excellent, commands a high price in our markets, and is frequently sold to the inexperienced as Canvas-back, which it so closely resembles that the deception is easily practised upon those who have never compared the species. It is readily identified by the difference in the color of its eyes, as well as by the form of its bill.

"At Egg Harbor, the Red-headed Ducks are more common than they are with us, but not so plentiful as on the Chesapeake, where the majority assemble during winter.

"Attempts have been often made to domesticate these birds, but only in one instance do I know of its having been attended with success. This was with an individual in the possession of Edmund Powell, of Westbury, L. I., who has induced it to become completely reconciled to its new home, as though it had never known any other course of life. This gentleman seems to have a peculiar facility for subduing the wild propensities of birds, of which he has a greater variety domesticated by himself than I have seen in any other part of the country. It is not only a great embellishment to his residence, but at times the means of affording convenient shooting, as they always invite straggling parties, when crossing the land, to stop and share with them, the invitation, given with so much earnestness, and being backed in their own language, they seldom fail to







"This common Duck is more generally known to our gunners by the name of 'Broad-bill' or 'Blue-bill.' According to Willoughby, it takes its name from a certain small kind of shell-fish on which it feeds—*Wolven*. It is met with along the whole extent of the Atlantic coast, and is a common visitor along our western lakes. It arrives among us from the 15th to the 20th of October, associated in large flocks, and on its first appearance usually decoyed, but after a longer term frequently shot at, becomes more shy. In doing so it takes shelter in the cover, and is frequently decoyed when gunned from the shore by having a decoy trained for the purpose of swimming between it and the shore, and also by moving a red bundle about every few seconds, keeping you a pers on your foot. This measure is either continuous or repeated—I am inclined to think the latter, from the capricious manner in which it approaches. The scene is truly ludicrous. I have tried this method with other species without success. It remains with us in the winter until the severity of the weather compels it to leave for a better supply of food. When passing over frozen bays, I have killed it at openings. When wounded, it avoids pursuit by diving, and is famous for skulking under the banks. It is no particular advantage to have a large flock come up to the decoys, for the instant you rise to fire, they scatter in all directions, so that it is difficult to get over two in range; when a flock swims up to you, as it so usually happens, of course greater havoc is made. It passes the most of the days in large flocks, seldom or never feeding on the shores or meadows, and is very quick in discovering the least suspicious sounds. In passing through the water, and even the current in the natural creeks and channels that form swamps, and the kind of mud-bay—in its native or other grounds, it is easily killed without decoys. It returns to us early in the spring, and remains until the mild weather makes it scarce here. When in good condition, its flesh is very delicious. In flying, it seldom makes any other noise than that produced by the action of its wings; but in swimming, when swimming busily about, it gives utterance to a



quick rattling or rolling sound. Its migratory flight is high and rapid. In winter, it is common on the Ohio and Mississippi Rivers, and their tributaries. In the Chesapeake Bay, where it is abundant, it is called 'Black-headed,' in Virginia, 'Raff Duck.'—*General's Birds of Long Island.*

## LESSER SCAUP DUCK.

*Falga Marda*, And *Falga Maw*; *tiraud*

" *Species Character*—Length of bill along the rap, two inches, of tarsus one inch and an eighth, from the point of the bill to the end of the tail feathers seven inches and a half, wing eight inches. Adult with the feathers on the head longer, more tipped, than *F. marda*, the head and neck more deeply tinged with purple, the white markings on the wings confined to the secondaries, while in *F. marda* the white extends over the primaries.

" The female is smaller than the male and bears the same resemblance in markings to the male. The black band on the wings is pointed out, as it all times the most prominent character.

" This bird is very closely allied to the preceding, so closely that it has been overlooked and condemned both, that species by our most eminent Ornithologists. On a close examination we find well defined specific character, in manner of its plumage and its inferiority in point of size. The Lesser Scap Duck is well known to the Bay gunners by the name of 'Creek Blood-bird' from its habit of frequenting the sand-beds and, which the Scap Duck = *F. marda* is usually observed on the open bays. It is a very abundant species, and during autumn and the early part of spring is quite common along the middle Atlantic districts, as well as on the streams in the interior. Its chosen food, migrations and breeding range, are similar to the former.—*General's Birds of Long Island.*



## RING-NECKED, OR TUFTED DUCK.

*Fuligula Rusticorpes*; *Bonap.* Tufted Duck, *Anas Fuligula*,  
*Wils.* Ring-necked Duck, *Anas Fuligula*; *Rusticorpes*; *Sav.*  
*A Ring.* Ring-necked Duck, *Fuligula Rusticorpes*, *Nutt.* Ring-  
 necked Duck, *Fuligula Rusticorpes*, *Aud.*

*Specific Character.*—Head tufted; bill about two inches long, very high at the base, the ridge at the base unusually broad, at the base margined with a rather broad band of yellowish-green; a broader band of the same color between the nostrils and the tip, the remaining part of the bill dark slate-color; speculum or wing spot black-gray. Adult male with the plumage of the head and upper part of the neck black, with purple reflections; at the base of the lower mandible, a triangular white spot; the middle of the neck encircled with chestnut, the upper part of the breast black; abdomen white, spotted with brown and tinged with yellow; flanks ash-gray, undulated with lines of white and dusky; vent and lower part of the abdomen dark-brown, undulated with faint lines of white; lower tail coverts blackish-brown, tail brown, upper tail coverts darker; back blackish-brown; primaries the same color, scapulars and lesser coverts greenish-black; outer secondaries, outer webs, light slate color, tipped with white; inner webs brown, inner secondaries dark-green, secondary coverts brown. Length eighteen inches, wing seven and three-quarters.

Female with a band of white on the forehead; head and neck brown, larger portion of the breast and abdomen white; the sides of the body brown. About two inches shorter than the male.

"This bird in general markings is not unlike the Scaup Duck, but it can at all times be readily distinguished by the slate-colored markings on the wings. By our gunners generally, it is considered a hybrid, and familiar to them by the name of 'Hazard Brand-hall.' Along the sea-coast it is not very abundant; still a few are observed almost every spring and autumn.



along the southern shore of Long Island, near the City Harbor. On the shores of the interior it is quite common in cold water. I have met with them in various parts of the State and in the Mississippi as far as New Orleans. It is a most common species and is usually observed flying but is scarce between shore and water.

"The largest flock I ever met with, was from shore to water—those I saw at the mouth of the river looking, but from my observations, they are not so plentiful in the vicinity of New York, as further down the Ohio River"—*Ginn's Pictorial Long Island*.

### THE RING-NECKED DUCK.

*Fuligula Kaitiagwa. Ring-necked Duck, Anas Fatajala, Wilson Am. Orn.*

"Male 18.28. Female 16.

"Abundant on the Ohio, during the autumn, winter, and early spring. Rattles fine along the coasts of the Middle Atlantic Districts.

"Adult male:

"Bill about the same length as the head, rather deeper than broad at the base, depth not more than one-third the length, the frontal angle acute. Upper mandible, somewhat curved from first squaring, then concave, lower for angular curvature, lower edge broadened flat at the base, then bristly convex, the sides mostly flat and perpendicular at the base, convex and squaring toward the end, the edge's soft, with about forty-two interstices, small, ungues obsolete, curved. Nostrils sub-basal, lateral, rather small, oval, pervious. Lower mandible flat, with the angle very long, and rather narrow, the dorsal line very short, slightly convex, the edges with about sixty-five lamellae, and smaller and mediate ones above.

"Head of moderate size, neck rather long and slender, body full and depressed, wings rather small. Feet very short, strong,



pointed rather far behind; tarsi very short, compressed, at its lower part anteriorly with two series of scutella, the rest covered with reticulated angular scales. Tars. scutelline above, first very small, five, with a broad membrane beneath, fourth longest, third scarcely shorter; claw slightly curved, compressed, almost the half an inch, most curved and acute, that of the third toe with an inner sharp edge.

“ Plumage monochrome, blended, rather glossy. Feathers of the middle of the head, and upper part of the hind-neck, very narrow and a little elongated; of the rest of the head, and upper part of the neck very short, of the back and lower parts in general broad and rounded. Wings of moderate length, narrow, acute, primaries curved, strong tapering, first longest, second very little shorter, secondaries round, rounded, next, the inner long and tapering. Tail very short, rather broad, much rounded, of sixteen rounded feathers.

— Bill black, with a broad band, the edges of both mandibles, and a band across the upper, toward the end, pale blue. Iris yellow. Legs grayish-blue, the webbs brownish-black; the head and upper part of the neck speckled black, with purple reflections. A brownish-red collar, broader below, on the middle of the neck; its lower part all round, as well as the back scapulars, smaller wing coverts, and posterior part of abdomen, brownish-black; inner secondaries the same color, outer bluish gray on the outer web, light brown on the inner, as are the primaries, of which the outer web and tip are dark-brown. Tail brownish-gray, often white, breast grayish-white, sides and fore part of abdomen grayish-white, minutely mottled with grayish-brown.

“ Length (total) of tail, 18 inches, of wing, 16; extent of wing, 28; wing from throat, 5 $\frac{1}{2}$ ; tail, 12 $\frac{1}{2}$ ; bill along the back, 8 — down the edge of the lower mandible, 1 $\frac{1}{2}$ ; tarsus, 1 $\frac{1}{2}$ ; middle toe, 2 $\frac{1}{2}$ —its claw,  $\frac{1}{2}$ .

“ Adult female:

“ The female has the neck under brown, the upper part of the head darker, the back blackish-brown, the speculum bluish,



gray, as in the male, the breast brownish-white, the loreal space and chin pale-brown, the abdomen under brown.

"Length 16 inches.

"The Tufted Duck of Europe—*Fulvus cristatus*, is very nearly allied to this species"—*Audubon's Birds of America*.

Dr. Wilson, in his *American Ornithology*, this bird has been assumed as identical with the Tufted Duck of Europe, and is said to be common to both continents, which I conceive to be erroneous.

It is common on all the western waters, but is rare, though not as much so, but that it is perfectly well known, along the Atlantic coasts, from Massachusetts to Louisiana.

## THE RUDDY DUCK.

*Fuligula Rubula*; *Rouge*.—*Ans Rubula*, Wilson.—*Fulgo*,  
*Salt Water Teal*.

"Male 14½, 21½.

"Adult male in summer:

"Bill as long as the head, a little longer than broad at the base, depressed and widened toward the end, which is rounded. Dorsal outline straight, and decurves to the neck; the neck short and slightly convex; the upper lip long and convex at the tip, broadly convex toward the end, the edges soft without, about forty short erect lamellæ externally on each side. The supercilios linear-oblong, suddenly decurved and directed backward, the lower part transversely expanded and serrulate, nostrils in an oblong depression covered with skin, medial rather small, linear-oblong, perisomes, lower mandible flattened, a little recurved, its angle very long and narrow, the lunette about a half dried and forty, extremely small, the unguis oblong.

"Head rather large, oblong. Eyes of moderate size. Neck short and thick. Body full, much depressed. Legs short and placed rather far behind, thus leaving a short space between



very short, compressed, with an anterior series of small scutella, an outer short series going to the mouth-bar, the rest reticulated. Hind toe very small, with a fine interior web; anterior toes very slender, the middle nearly double the length of the others, the outer almost as long, the inner considerably shorter, and having a broad lateral margin, the web reticulated. Claws rather small, slender, compressed, shortly angled, acute.

"Plumage dense, mottled, on the upper parts very soft; on the fore part of the head stiffish; on the lower parts with a silky gloss, and stiff, bearing the extremities broad, and the barbs sharp and pointed. Primary feathers tapering to the first longest, abruptly rounded. Tail short, much abbreviated, of eighteen stiff, narrow feathers, of which the center is very strong, and runs out in a flattened concave point.

"Bill and edges of eyelids grayish-blue. Iris hazel. Feet dull grayish-blue, webs inclining to dusky; claws grayish-brown. Upper part of the head and nape, deep bluish-black, this color running to a point about the middle of the neck; a large white patch on each side of the head, from the bill to behind the ear, narrowed on the throat. Neck all round and all the upper parts, as well as the sides of the rump, rich glossy brownish-red, or chestnut; the lower parts grayish-white, tinged with brown, and marked with transverse interrupted bars of dusky. Wing coverts, quills, and tail feathers, blackish-brown.

"Length to end of tail, 14 inches; to end of wings, 12; to end of claws, 10; extent of wings, 21; tail, 4; bill, along the ridge, 1. Weight, 1, lbs."—*Baldwin's Birds of America*.

Mr. Audubon further speaks of this beautiful and showy Duck in the following terms, which I quote as presenting so remarkably a discrepancy with Wilson's statement, at a more remote period, that we must suppose that this species has become, like the case with many other birds of this and other genera, more frequent in this region, of late. Mr. Giraud, in his "Birds of Long Island," speaks of it as not very rare, though not a common species, and says that it is known by the gunners as the "Salt Water Teal."



"The Ruddy Duck," says Mr. Audubon, "is by no means a rare species in the United States. Indeed I remember it quite abundant especially in the winter months in the portions of Florida where I have been, and as early as forty in one morning. In our eastern states they breed there in great numbers, and a great proportion from the spot to the Chesapeake, as the markets of which, as well as of New York, I have seen many, the first three and Mississippi, they are in about the same time, and I am no doubt they will be found breeding in all our Western territories, as soon as attention is paid to such matters as the searching for nests, with the view of protecting them, or of destroying such, which might prove injurious to the husbandman."

It is curious to observe how widely different is the language of the present of American Ornithology to that of a great and great Wilson.

"This very rare Duck was shot some years ago, on the river Delaware, and appears to be a new species. The specimen was injured with the female that accompanied it, and which was killed in the same place, as the only male of the kind I have met with. I am present possessed of the superb museum of my brother, who, a friend Mr. Audubon has said,

"the comparison this Duck with the description given by Latham of the *Junco Phœbe* for I was at his time could have here I had found out the specimen, but a more careful examination of both specimens led me that they could not be the same, as the present differs considerably in colour and, besides, has some peculiarities which the eye of a naturalist could not possibly have overlooked, in his examination of the species, and to have been detected by him from Jamaica. Whereas the general resemblance of these species may exist in this part of the world, at a distance, it is extremely rare, since, among the many thousands of Ducks brought to our markets during winter, I have never heard of a single individual of the present kind having been found among them.

"The Ruddy Duck is fifteen inches and a half in length, and



twenty-two inches in extent, the bill as broad at the tip, the under mandible much narrower, and both of a rich light-blue; nostrils small, placed in the middle of the bill; cheeks and chin white, front, crown, and back part of the neck, down nearly to the back, dusky, rest of the neck, whole back, scapulars, flanks, and tail coverts, deep reddish-brown, the color of bright mahogany; wings, plum pale drab, darkest at the points, tail black, greatly tapering, containing eighteen narrow pointed feathers, the plumage of the breast and upper part of the neck is of a remarkable kind, being dusky above at bottom, ending in hard bristly points, of a silvery gray, very much resembling the hair of some kinds of sealskins, all these are thickly marked with transverse curving lines of deep brown, belly and vent silver-gray, thickly crossed with dusky above, under tail coverts white; legs and feet ash-colored.

"*Pomarine Reddy Duck*—This is nearly of the same size as the male, the front, legs, and crown deep blackish-brown, tail as in the male, very broad at the extremity and largely toothed on the sides, of the same rich blue, cheeks a dull cream, neck plum, dull drab, sprinkled about the annulars with blackish, lower part of the neck and breast variegated with gray, ash, and reddish-brown; the reddish dies off towards the belly, leaving this last of a dull white, shaded with dusky ash, wings as in the male, tail brown; scapulars dusky brown, thickly sprinkled with whitish, giving them a gray appearance; legs ash.

"A particular character of this species is its tapering, sharp-pointed tail, the feathers of which are very narrow, the body is short, the bill very nearly as broad as some of those called Shovelers, the lower mandible much narrower than the upper." Wilson's *American Ornithology*.

This bird I have never myself, because fortunate as to fall in with, as it is more particularly in these regions, a sea duck, which I am accustomed to pursuing than the various species of upland game; and as it is shot more frequently in the eastward of Montauk Point and Boston Bay, than on the lagoons of



Long Island or the Jersey shores, where only I have followed wild-fowl shooting.

## THE PIED DUCK.

*Pelegrina Labradorica* — *Valger, Skunk Duck* — *Sand Skunk Duck*

This is a very much rarer species than the Duck last mentioned. Its range does not extend south of Chesapeake Bay. It is found the Delaware River as high as Philadelphia, is met with in greater or less numbers every year along the coast of New Jersey and Long Island, and frequents the shores of Massachusetts, Maine, and Nova Scotia, during the seasons of migration. It is a truly marine bird, seldom entering rivers, unless forced by stress of weather to do so. Brewster, Labrador. Mr. Townsend, in his "Birds of Long Island," states, that a few are killed on that coast yearly, adding, "with most numerous concentrations inhabiting the western side of the continent." In this, however, he differs from Mr. Audubon, who speaks of them as purely northern and eastern fowls, "never seen in the south." On Long Island it is called the Skunk Duck, from some fancied similarity in its color. Mr. Wilson thus describes it:

"This is a rather small species, common to coast and is never met with on fresh-water lakes or rivers. It is called by some gunners the Sand Skunk Duck, from its habit of frequenting sand-bars. Its principal food appears to be shellfish, which it procures by diving. The flesh is dry, and partakes considerably of the nature of its food. It is a house-bird during winter, most commonly early in the month of March a few are observed in our market. Of their principal manners, place or mode of breeding, nothing more is known. Latham observes, that a pair in the possession of Sir Joseph Banks were brought from Labrador. Having myself had frequent opportunities of examining both sexes of these birds, I find that, like most others, they are subject, when young, to a progressive change



of color. The full-plumed male is as follows: length twenty inches; extent twenty-nine inches, the base of the bill and edges of both mandibles to two-thirds of their length, are of a pale orange-color, the rest black: towards the extremity, it widens a little in the manner of the Shorelarks, the sides there having the singularity of being only a sort, loose, pendulous skin, irides darkhaze; head and bill of the neck white, marked along the crown to the hindhead with a stripe of black; the plumage of the cheeks is of a peculiar hoary white at the points, and round the neck passes a collar of black, which spreads over the back, rump, and tail coverts, below this collar the upper part of the breast is white, extending itself over the whole scapulars, under coverts and secondaries, the primaries, lower part of the neck, whole belly, and vent are black, tail pointed and of a bluish hoary color, the fore part of legs and edges of the toes, pale whitish-ash, hind part the same, bespattered with blackish; webs black, the edges of both mandibles are largely preternatural. In young birds the whole of the white plumage is generally strongly tinged with a yellowish cream color, in old males, these parts are pure white, with the exception sometimes of the hoary, pointed plumage of the cheeks, which retains its cream tint the longest, and with the skinny part of the bill, form two strong peculiarities of this species.

\* The female measures nineteen inches in length, and twenty-seven in extent: bill exactly as in the male: sides of the front white, head, chin, and neck, ashy-gray, upper parts of the back and wings, brownish-ash: secondaries only white; tertials hoary: the white secondaries form a spot on the wing, bounded by the black primaries, and long hoary tertials edged with black, while lower parts a dull-ash, skinted with brownish-white, or clay color, legs and feet as in the male: the bill in both is marked from the nostrils backwards by a singular, heart-shaped outline.

\* The wadpate of the male measures ten inches in length, and has four enlargements, viz., one immediately below the



mouth, and another at the interval of an inch, it then bends largely down to the breastbone, to which it adheres by two strong muscles, and lies at that point in third exposure. It then becomes flattened, and betwixt its opercular and the lungs, forms fourth enlargement, much greater than any of the former, much as hardy and round peeling out from the bottom. The intestines measured six feet, the stomach contained small clams and some glutinous matter, the liver was remarkably large.\*

## THE VELVET DUCK.

*Fuligula Fulva*. - *Velox*, White-Winged Duck.

This species is very abundant along the coasts of the Atlantic, from Georgia westward to Nova Scotia. It is a very numbersome bird, tough and strong, but it is so hardy and bold that its slaughter is considered a test of skill among hunters, and it is on that account somewhat eagerly pursued.

"Tus" and the pied-up are frequently mixed, shot together as often as the same species, by the hunters of the coast. The former, however, differs in being a greater size, it having a broad band of white along the wing, a spot of the same under the eye, and in the structure of its bill. The latter of both are very tame, and they very frequently enter the same feed entirely unscolded, where the former are driven, and return to the latter, to be scolded by spending to drive. They often associate with the Scoters in the same companies, and for some respects them. On the whole, however, they differ in flesh, it resembles somewhat the European species of quail, and is very little esteemed.

"The Velvet Duck, preserved, tastes like quail in origin, and two feet, three inches in extent, and weighs about three pounds. The male breed, with exception of the liver, which is

\* In William Audubon's *Illustrations of American Ornithology*, this species—immediately precedes his notice of the Velvet Duck.



is black, the rest red, except the lower mandible, which is of a pale yellowish-white, both are edged with black, and deeply forked; irides pale cream; under the eye a small spot of white; superior border of the gape brownish-black, the lower mandible excepted, which is white, forming a broad band across the wing; there are a few indistinct dusky spots on the upper plumage; the legs are red on the outside and deep yellow, sprinkled with blackish, on the inner sides; tail stout and pointed.

The female is very little less than the male, but differs considerably in its markings. The tail is dusky, forehead and cheeks white, under the eye dull brownish. Behind that, a large wedge-shaped white, whole upper parts and neck dark brown, dark tip of the plumage lighter, considered white; wing quite deep brown; belly brownish white; tail hoary brown, the throat is white, marked with dusky specks; legs and feet yellow.

L. John informs us, that this species is sometimes seen on the coast of England, but is not common there; that it inhabits Denmark and Russia, and in some parts of Siberia is very common. It is also found at Kamtschatka, where it is said to breed, laying five or six to ten; the eggs are eight or ten, and white; the males depart, and leave the females to remain with the young until they are able to fly. In the River Obiotska they are so numerous that a party of natives, consisting of fifty or more, go out to hunt, and drive these Ducks up the river before them, and when they take station and enclose it once, and knock them out of the world with clubs, they catch numbers that each man has twenty or thirty for his share."

Mr. Gould mentions that he is preserved on the right side of Long Island, thus, he is said to Mr. Giraud, his remark being that he is an occasional or perfectly rare bird. I have also heard it common, various kind of waterfowl, large shot, in my remarks on upland shooting.

When a male is in the marsh, performing its long journey from its breeding place at the North in silence. It arrives



among us about the middle of October, and remains until about the middle of April. It is a heavy-bodied bird, and well supplied with down. When in that plumage, a heavy under-run is required to stay its outward course. When, however, we see the south-bound Long Island braggart, we have a favorable opportunity, when the surf is heavy, and with a letter or twenty birds, form a line about two or three hundred yards apart. In this way it is difficult for a duck to avoid one or the other of the birds. Those used for this purpose are light-shoots, containing generally but one person, as the object is to hit the broad right, in order that they may take the wings with safety.

"This manner of shooting has been practiced only by experienced baymen, for if the wind comes in suddenly from the south, as sometimes happens, it causes the surf to rise. On such occasions, even the most skilful are occasionally distressed.

"In water-fowl shooting, a very important item is practiced in using two heavy loads. I have noticed it particularly with this species, having often seen the bird take the water, coloring it for a space with blood, without discarding a second shot. This may be accounted for by the manner of striking the flesh in such a manner that when it escapes the water the bird is relieved by breathing. Lighter loads make a smaller wound, which instantly closes, thus depriving it of one point. When using smaller shot, we have also a better chance for hitting your mark, as a larger number of pellets are contained in the same weight."

## THE SURF DUCK, OR BLACK DUCK.

### *Falopala Peripatula* — *Edge Spectable Duck* — *Chad*

Abundant from Nova Scotia to Maryland in winter, moving southward even to the mouth of the Mississippi in severe weather. Breeds from Labrador, northern and. The flesh, like that of the last species, is coarse and fishy. Take the best and following



species; it is known on the Long Island shore as a *Chant*, and is shot solely for sport. He is briefly described in Wilson's Ornithology, as follows:

"This Duck is peculiar to America,\* and is altogether confined to the bays and shores of the sea, particularly where the waves roll over the sandy beach. These birds construct principally of their small aquatic shells, but, deeply described, spent here, and others that are in the sand near its entrance. They dig almost constantly, leave in the sandy bays and amidst the tumbling surf. They seldom or never visit the salt marshes. They continue to stay shore during the winter, and leave us early in May, for their breeding places in the North. Their skins are remarkably strong, and their flesh comes tasting of fish. They are shy birds, not easily approached, and are common in winter along the whole coast, from the River St. Lawrence to Florida.

"The length of this species is twenty inches, extent thirty-two inches, the bill is yellowish red, elevated at the base, and marked on the side of the upper mandible with a deep square patch of black, preceded by another space of a pale color; the part of the bill thus marked swells, or projects, considerably from the common surface; the nostrils are large and pectinate; the sides of the bill broadly serrated or toothed, both mandibles are furnished with a nail at the extremity. Irides, when seen very pale cream, whole plumage a shining black, marked on the crown and back head with two triangular spaces of pure white: the plumage on both these spots is shorter and thinner than the rest, legs and feet blackish red, membrane of the webbed feet black, the primary quills are of a deep dusky brown.

"On dissection, the gizzard was found to be greatly enlarged to the gizzard, which was altogether filled with broken shells.

\*—This is two instances of the bird being shot on the shore of the Hudson, from a canoe, and, when observed on shore, it was reported in the concluding number of Mr. Wilson's *Illustrations of British Ornithology*. It is always usually met with on the coast east of Long, but generally in large shoals, and, though not quite at present, it is not usually confined to America."



fish. There was a singular hard expansion at the commencement of the windpipe, and another much larger, about three-quarters of an inch above, where it expands into the two sides of the lungs; this last was larger than the space between them, flat on one side, and convex on the other. The protuberance on each side of the bird communicated with the nostril and was hollow. All these were properly adapted to contain supplies of air for the bird's support when under water, the cavity also protect the head from the sharp edges of the shells.

## THE AMERICAN SCOTER.

### *Feligula Americana.—*Volgo, Coot.

This bird is abundant along the Atlantic coasts during the winter, from the gulf of the St. Lawrence to the mouth of the Mississippi. It is never seen inland. Hutton and Gmelin. Like the two last named varieties, the Coot's western. Mr. Giraud thus describes it together, under the name of *Lema de Ind*, when it is known, like the Velvet and Sooty Ducks, as a Chesapeake bird, but it is never at Chesapeake, and has no resemblance.

*Specific Character.*—Bill erect, straight, pointed at the tip, and tipped with black at its end; the base of the upper mandible, where it is very broad, and the nostrils, dusky, perfectly free, and round. The upper part of the upper mandible as far as the nostrils, some considered very short. Length from beak to end of wing four. Feathers very close, with the ground beneath of the breast much longer, upper parts blackish, lower parts lighter.

"This coterie around the Coots'—It goes on, it goes on, and subsists by holding the party connected with the Velvet and Sooty Ducks. Like the other divers it is often seen by becoming entangled in the fishermen's nets. In the Eastern States, it is known by the name of 'Butter-Bill'."



## THE EIDER DUCK.

*Falcula Abdominalis* — *Valge, Square Duck.*

This well-known species, famous for its admirable down, is common to both continents. A few pairs breed on the coast of Maine, and thence northward to Labrador. It is a frequent visitor, however, any where along the Atlantic coasts of the United States; is seldom indeed seen southward of New York, and hardly ever of New-Jersey.

Its flesh is considerably oily and fishy; and but for its down it is worthless.

To the Esquimaux and the Greenlanders alone can it be regarded as the best of game. Its peculiarity, and the fact of its occasionally breeding on the coast of the States, which no other of the *Scanducks*—*Falculæ*—are known to do, alone induces me to give it a place in this work.

## GOLDEN-EYE DUCK.

*Falcula Chrysolæ.*

♂ Male, 22.31½. Female, 16.23.

Abundant during the winter on all the running streams of the interior, as well as along the Atlantic coast, as far south as the Gulf of Mexico. Breeds in the high northern latitudes, as indicated in the northeastern districts, Rocky Mountains, Columbia River.

♂ Adult male in winter:

♂ Billblack. Iris bright yellow. Feet orange yellow, webs dusky, claws black. Head and upper part of the neck deep green, dusky on the sides; on the crown certain lights. Back, posterior scapular, lesser secondaries, edges of wing, alula, primary coverts, primary quills, and four or five outer secondaries, black; the back being darker and glossy, the wing feathers tipped with



known. An elliptical patch between the base of the bill and the eye. Lower part of the neck and exposed sides of the body uniformly, the lower parts generally more capitate, excepting the margins, which are black, a large patch on the wing involving many of the secondary coverts, a rest on the secondary coverts and six or seven of the secondary and quills white. Terminal parts of these secondary coverts black. Venter feathers and lower wing coverts dusky, the associated feathers of the sides have the inner, some of them as often as the margins, black, that color, in those of the innermost, covering the whole web. The feathers on the legs, and along the sides of the rump, dusky. The tail brownish-gray.

"Length to the end of tail, 25 inches; to end of wings, 17 $\frac{1}{2}$ ; to end of claws, 20; extent of wing, 41; tail along the ridge, 11—from the angles, 7; wing from flexure, 9; tail, 4 $\frac{1}{2}$ ; tarsus, 2 $\frac{1}{2}$ . Weight, 2 lbs. 4 $\frac{1}{2}$  oz.

"Adult female:

"The female is much smaller. Bill dusky, a portion of the end, not however reaching the nostrils, dull yellowish orange. Eyes and feet as in the male. Head and upper part of the neck, dull or black-brown; lower part of neck and sides of the body, brownish-gray, the feathers intermixed with pure gray. Wings brownish-black, seven of these coverts, excepting at the bases, white; the smaller coverts lighter and tipped with grayish white; the legs and sides of the rump grayish brown.

"Length to the end of tail 18 inches; to end of wings, 15; to end of claws, 17 $\frac{1}{2}$ ; extent of wings, 28. Weight 1, lbs."—*Audubon's Birds of America*.

"This Duck is well known in Europe, and in various regions of the United States, both along the seacoast and about the lakes and rivers of the interior. It associates in small parties, and may easily be known by the vigorous whistling of its wings as it passes through the air. It swims and dives well, but seldom walks on shore, and then in a waddling, awkward manner. Feeding chiefly on shell fish, small fry, &c., its flesh is



less esteemed than that of the preceding. In the United States they are only winter visitors, becoming numerous in the month of April, being then on their passage to the North-land. They are said to build, like the Wood Duck, in cotton trees.

"The Goldeneye is found in both continents, and in the northern parts of Europe during winter, and is one of the most common migratory Ducks. The females are distinguished by a short, stout, and compact body; the neck short, the head large, and apparently more prominent than its black plumage; the bill short, but thick, and curved at the base; the feet placed far behind, and formed for swimming. The male is stout and rapid. In habit, they delight more in lakes and rivers than the sea, are generally found in small flocks, are very clamorous during the breeding season, and feed on fish, aquatic insects, molluscs, &c. Richardson says, *Chasque* colours and affords frequent the rivers and fresh water lakes through the Fur Countries, in great numbers. They are by no means shy, allowing the sportsman to approach sufficiently near, but they so dash violently at the flash of the gun, or the ringing of a horn, and are consequently so difficult to kill, that the natives say they are endowed with some supernatural power. Hence their appellation of 'conjuring' or 'split Ducks.'

"In Britain, they are winter visitors, assembling in small parties on the lakes and rivers. On the latter, they may be generally found near the head or foot of the stream, diving incessantly for the spawn of salmon, with which I have often found their stomachs filled. The party generally consists of from four to ten, and they dive together. At this time it is not very difficult to approach them, by creeping forward, while they are under water, and sometimes when they rise. I have often, in this way, come to the very edge of the water, and awaked the arising of the flock. When taken by surprise, they dive on the instant of the first shot, but rise and fly immediately after.

"The young of the first year has been made a nominal species, and is somewhat like the adult females, but always distinguished by larger size, darker color of the plumage of the head,



and the greater proportion of immatures in the water. The males have the white spot on the duck perceptible about the last spring, and the other parts of the plumage proportionally distinct. Among most of the flocks which visit our water, certainly, it is rare to find more than one fully plumaged male present, sometimes not more than two or three, in association with a large number of fifty or sixty immature birds. — *Hesperian Ornithology*.

Mr. Wilson, proceeds to observe, that he is convinced that the Lesser Merganser is *longer-lived* in Europe, than either the young of the Golden-Eye. The point has, however, been long since investigated, and thoroughly disproved.

This is Eminent both in this country and in England, being the most cunning, shy and wary of the Duck species, and although Mr. Audubon speaks of it as easily decoyed, and tempted even by very rude imitation of itself to pass and repass the decoy, allowing it and the decoy to be carried in the manner, I have never found a single instance of this. Mr. Giraud's testimony is exactly the reverse of this, and I am almost inclined to conjecture, he has either chosen to report this without offering to approach, or disguised the matter to his taste. The same gentleman observes, that in France, Canada, and not a very many other parts, I have never observed it, and at all in the United States, although I have it but extremely rarely late in the season, in large flocks on Lake Champlain. I am assured, however, that on the western and southern streams, which do not freeze so early, or so full very late in the water, it is very common and abundant.

When it feeds on fresh waters, Mr. Wilson to the contrary notwithstanding, no Duck, with but two or three exceptions, is preferable to the Golden-Eye.



## THE RUFFEL-HEADED DUCK.

*Fuligula Albida*.—*Valge, Digger, or Ratter-Bill*.

"The Ruffel-headed, or ratter, and has extremely been named, the Buffalo-headed Duck, from the disproportion size of its head, is fourteen inches long, and twenty three inches in extent, the bill is short, and of a light blue, or leaden color, the plumage of the head and half of the neck thick, long, and velvety, projecting greatly over the lower part of the neck; the plumage on the forehead and nape is rich glossy green, changing into a shining purple on the sides and sides of the neck, from the eyes backward passes a broad band of pure white, iris of the eye dark, back, wings, and part of the scapulars, black, rest of the scapulars, lateral band along the wing, and whole breast, snowy white, belly, vent, and tail coverts, dusky white; tail pointed, and of a hoary color.

"The female is considerably less than the male, and entirely destitute of the tumid plumage of the head, the head, neck, and upper parts of the body and wings are sooty black, darkest on the crown; side of the head marked with a small, oblong spot of white; bill dusky, lower part of the neck ash, tipped with white; belly dull white, vent cinnamon, outer edges of six of the secondaries and their adjacent coverts white, except the tips of the latter, which are black, legs and feet a lead blue, tail hoary brown, length of the male three feet six inches, stomach filled with small shell fish. This is the Spirit Duck of Pennant, so called from its dexterity in diving, (*Arc'tic Zoology*, No. 487,) likewise the Little Brown Duck of Catesby, (*Natural History of Carolina*, pl. 98.)

"This species used to come into Hudson's Bay, about Severn River, in June, and make their nests in fens in the woods near ponds. The young males, during the first year, are almost exactly like the females in color"—Wilson's *American Ornithology*.

In the "Birds of Long Island," it is mentioned thus—farther



than most. I have only to say, that it is a beautiful and very delicate little bird :

"For essentially improved Little Duck receives its name from its disproportionately sized bill, some twelve body. From its extreme delicacy it is called by our countrymen 'Dipper.' I have to remark, that the true American Dipper (*Am. J. J. J.*) was formerly found only in the Connecticut River. I have often detected it in the presence of the more and bolder Gadwall, or 'Spring Duck,' as it is sometimes called, and even so I am disposed to think are distinct species. I have met with it in various parts of the United States, and indeed during the spring and autumn it is dispersed throughout the Union, visiting the numerous small water courses, it shows a decided tendency, that when sitting on the water it is very difficult to kill it, even with percussion caps. It is an excellent swimmer, and the swimming is its fond occupation, of small fish it is voraciously in the condition, but not commonly a supper, and for the time. In New Jersey, it is called 'Hight Hight' or 'Hight Hight.' It is a very noisy quack. It is generally met with in pairs, and the appearance of spring, when the season is in the fall, it is common to find in October, commencing near the latter part of April, when it begins for its summer residence at the North, where it breeds."

## THE HARLEQUIN DUCK.

*Fuligula Histrionica. Fulgo, the Harlequin, Lady Duck.*

A very beautiful, but extremely rare species. According to Mr. Audubon, it is very rarely found southward of Boston Bay. Mr. Giraud states that he has lately discovered it in the marshes of Long Island, although some years since it was said to have been abundant there. It breeds along the eastern coasts of the United States, up to Labrador. An instance is mentioned by Dr. Richardson, of one killed on the eastern shore of the Rocky Mountains, it is probable, therefore, that to the northward it extends its migrations very far inland.



"The Hark-quinn Duck is a native of both continents. It is an excellent shooter, faster whistler than we, flies swiftly, and to a great elevation. It is much esteemed for the colour, and its flesh is said to be excellent on the table."

"Adult male in summer :

"Bill yellowish blue, tip of the mandible lighter, iridescent; distal maxilla, feet light blue; crown greyish black, the crown whitish; a broad band from the base of the bill to the occiput bluish-black, marked behind with light yellowish red, before with white that ceases before a broad triangular spot on the cheek, anterior to the eye, sides of the head iridescent all round, purple before; a spot of white behind the eye; a broad line on crown, below the neck, a complete ring of white below the middle of the neck, with a curved band of the same color anterior to the wing, and three white markings broad-edged with deep blue. The rear part of the back hoar peary blue, the basal part deepening to rust, seems to become almost black, of which color the rump is all round, scapulars chiefly white; wing coverts purplish blue, as are the alula and primary coverts, the quills dark greyish brown, the tail greyish black; a small white spot near the flexure of the wing, a band of white across the wing, formed by the tips of the secondaries, of which the inner four, the outer six, principally of the same color; fore part of the breast purplish blue, hind part and abdomen greyish blue, with a light red, a linear spot of white near the root of the tail.

"Length to end of tail, 17½ inches; breadth of wings, 11½, to end of elon, 16½; extent of wings 26½; wing from flexure, 7½; tail 3½. Weight 1½ lbs.

"The male does not attain his full plumage until after the third moult."—*Audubon's Birds of America*.



## THE LONG-TAILED DUCK.

*Falagata Chlorurus*.—*Falco*.—*South-Southerly*.—*Old Wife*.—*Old Squaw*.

Abundant during the winter along the coast of the Atlantic district, to the mouth of the Mississippi. Never on the water or in the air.

*Species Characteristic*.—Length of tail from the termination of the moulted feathers to the point one inch and one-eighth; the upper mandible rounded, the same very thin, rounded on the deeply serrated and denticulated with a saw with twenty three teeth. In the male the middle part of tailfeathers are extended about four inches beyond the next longest, which character is wanting with the female. Adult male with the bill black at the base, anterior to the gonys reddish orange, with a dusky line extending to the eye, base of the head white, the same color passing over the front down the throat on the back, eye darkened, black, and basal part dusky white, with a few feathers of yellow brown, some patches, the sides of the neck, terminating in reddish brown. The neck white, breast brownish red, to the neck, on the sides of the upper mandible white, black on the sides, passing dark brown, several times glistering with iridescent blue, some circular band of black on the base part of the neck, the outer two tail feathers white, the next two marked with brown, excepting the four moulted feathers, which are blackened on, the middle part extending several inches beyond the same. Female without the long sagittate or elongated tailfeathers, bill dusky green, base dark grayish brown, a patch of grayish white on the sides of the neck, crown blackish, upper parts dark grayish brown, lower parts white. Length of neck from the point of the bill to the end of the elongated tailfeathers, twenty three inches, wing eight inches and two eighths. Female about six inches less in length.

"This handy bird of the South is known by the name of 'South-Southerly,' in this vicinity it is called by our gunners



'Old Wife,' or 'Old Squaw.' The Long-tailed Duck is about the last that leaves its natal regions. Provided with a covering sufficient to protect it from the most piercing blast of winter, it struggles until the icy currents are compelled to seek a better supply of food. When in large flocks, they leave the inhospitable regions of the North for a milder climate; they soon separate in small parties, and in the course of the winter are to be met with throughout the Atlantic districts. It is very timid, and keeps such vigilant watch, that it is difficult to approach. It is very expert in diving, passing swiftly under water, that when sitting it is almost impossible to shoot it. The most successful manner is by sailing after it. On the wing, it is the swiftest of its tribe, and the most difficult to shoot. Its body is thickly coated with down-scales, thick as tough and fishy; and is occasionally seen on the small streams in the interior. Common along the Atlantic districts."—*General's Birds of L. I.*

## THE KING DUCK.

### *Fuligula Spectabilis.*

This beautiful species is an inhabitant of the higher regions of both continents. It is now rarely seen so low as Boston Bay, where it is said by the gunners to have been plentiful within thirty years. In fact it is now very rare within the limits of the United States, though Mr. Giraud was so fortunate as to obtain a specimen in full plumage killed near Long Island Sound. It is closely allied to the Eider Duck, produces down as valuable, and in many respects the same troubles with that bird.

I never saw but one specimen of this beautiful bird, which was brought by my friend, Mr. Henry Palmer, of Nova Scotia, to the office of the *Spirit of the Times* during last summer. He had shot it off the northern end of Newfoundland, and was not acquainted with its name.

It is so rare that it cannot be termed game, and is, I presume, uneatable. It will be easily recognized by its pale-yellow bill,



with a pubescent process at the base, of a deep tawny hue. Its crown and nape of a faded gray blue. Its cheeks of the most delicate pinkish tawny white, broad, even, and level, and lower parts of the same. Upper parts and wings dusky, with the exception of the fore part of the crown, the upper part of the wings, and a patch on the side of the wing, which is a dull olive-buff.

Length to the end of tail 2½ inches. Tarsus of wing 1½.

The rarity of this bird renders further description unnecessary.

## THE WESTERN DUCK.

### *Fuligula Dispar.*

This much-colored parrot-tailed green and white bird, with an orange-colored bill and feet, legs, and claws, is the eastern end of this continent, and is common on the western coast, in the highest altitudes that the human eye can reach. Mr. Audubon's conclusions mark the American Bird as distinct from an American species, but these are studied in the collection at Norwegian, Landmark, which was added to the collection in 1830.

It is only mentioned here from the possibility that, as the growing number and increasing change of temperature, this bird may be shown to be a new species. At present it is scarcely a bird, but less game of its United States.

With this bird ends the list of the Sea Ducks of the United States of America; but inasmuch as I omitted, in my mention of the Inland or Fresh-water Ducks, the *Wingspread*—*Fuligula Americana*—which, though not properly a sea Duck, is rarely found in the interior, even in the western States, although they do visit the waters of the Ohio, and the adjacent ponds, keeping company, however, even there with the *Piscivorus* and



TRAMP, rather than with the MALLARDS and DUSKY DUCKS. It abounds in the Chesapeake, in company with the CANVASBACKS, REDHEADS, LONGNECKED DUCKS, and SHOVELERS. It is there, and throughout the most known of the river-parks, and is esteemed excellent eating. The GARDNER—*Long Necked*—and SHOVELERS—*Long Necked*—have been noticed already. They are common to the West, but scarcely in sufficient quantities—though delicious birds, to be enumerated as game proper.

### THE AMERICAN WIDGEON.

*Anas Americana.—Fulge, Bald-pate.*

\* There is a handsomely marked and sprightly species, very common in winter along our whole coast, from Florida to Rhode Island, but most abundant in Carolina, where it frequents the rice plantations. In Martinico, great flocks take short flights from one rice-field to another, during the rainy season, and are much complained of by the planters. The Widgeon is the constant attendant of the celebrated Canvasback Duck, as abundant in various parts of the Chesapeake Bay, by the aid of whose labor he has ingenuity enough to continue to make a good subsistence. The Widgeon is extremely fond of the tender roots of that particular species of aquatic plant on which the Canvasback feeds, and for which that Duck is in the constant habit of diving. The Widgeon, who never dives, watches the moment of the Canvasback's rising, and, before he has his eyes well opened, snatches the delicious morsel from his mouth, and makes off. On this account the Canvasbacks and Widgeons, or, as they are called round the bay, Bald-pates, live in a state of perpetual contention; the only chance the latter have is to retreat, and make their approaches at convenient opportunities. They are said to be in great plenty at St. Domingo and Cayenne, where they are called Vingeon, or Gingeon. Are said sometimes to perch on trees; feed in company, and have a sentinel on the watch, like some other



birds. They feed little during the day, but in the evenings come out from their hiding places and are then easy to find by their persistent whistle, or *chew note*. The soft note or whistle is frequently imitated with success, to entice them within gunshot. They are not known to breed nearly so far as the United States are common in the winter months, hence the coasted Bay Harbor and Cape May, and as far as of the Delaware. They leave these places in April, and appear upon the coasts of Hudson's Bay in May, as soon as the storm comes on, chiefly in pairs, but there may be many together, and feed on flies and worms in the swamps. In pair or flocks of 2 or 3 in.

These birds are frequently brought to the market at Baltimore, and can be had at a good price for the domestic excellent. They are of a heavy, somewhat pouter-like, and with proper attention might easily be domesticated.

The Widgeon or Gadwall measures twenty-two inches in length, and thirty inches in extent. The top is of a light rusty, brownish black. The throat and breast cream-colored, sometimes nearly white. The feathers on the neck, the back and sides to the middle of the neck, lateral extended border of deep dusky green, with red and purple. The rest of the neck and back is brownish tan, the green extending over with some white, thickly spotted with black. The throat and breast green, neck, breast and sides to the middle of the neck cream-colored with fine brown spots. The wings when closed are dusky, back and scapular bones, throat and breast brown, crossed with undulating lines of orange-brown. Lower part of the tail more dusky, tail coverts more pointed whitish, crossed at the base. Tail pointed brownish tan, the two middle feathers of the lower part of the tail and the upper shoulder feathers have brownish red, orange, greenish yellow, brown and black. The primary and secondary feathers brownish black, mostly greenish, crossed with green, toward the primaries the outer black crossed with white, toward the center and the trailing part toward the secondaries are white.

The female has the whole head and neck yellowish white.



thickly speckled with black, very little Rufous on the breast; the back is dark brown. The young males, as usual, very much like the females during the first season, and do not assume their full plumage until the second year. They are all subject to a regular change every spring and autumn.

This species is closely allied to the European Widgeon, and may be taken, as the American writers do. They sometimes meet each other about the same coasts, that of America extending beyond it, and that of Europe reaching to the European verge. They will form the typical *Streptopus* genus *Merula*, which will probably stand in the rank of a most subordinate group only. The form seems to consider the nearest possessing many connotations, which may be found to connect some parts of the natural system. The bird of Europe, except in the breeding season, is mostly an inhabitant of the sea shore, during a severe winter, a few stray inland to the larger lakes and rivers, but as soon as a recurrence of milder weather takes place, they return to their more favourite feeding grounds. In Russia they are mostly migratory, and at the first commencement of our harder weather, are found in vast flocks on the flatter coasts, particularly where there are beds of muskels and other shell fish. During day, they rest and plume themselves on the lighter shelves, or dance buoyant on the waves, and only come in to their activity without approach of night. At this time they become clamorous, and rising in dense flocks from their day's resort, proceed to the feeding ground, now they resemble to the wind as to some extent. At the commencement of winter they are fat and downy, much sought after by the sea sport men, and are kind to resort to a common stage, as watch in the track of the keener than the shore in some parts, a cold stage. To mount plume, common on the sport, as a natural opening, and strong wing, the rest is very few, and their approach is easily known by the sound of their wings, and their own shrill cry, which is very loud and clear. They are subject to a natural change of plumage. Mr. Cuvier mentions, that a few of these birds breed annually in the marshes in the neighbourhood of



Duck Creek, in the State of Delaware. — *Wilson's American Ornithology.*

The three birds of the genus *Mergus*, namely the Greenbacked, or Silver Sides (POMPOIDAE), Hager's Merganser, and the Red Breasted Merganser — *Mergus serrator*, and the Hager's Merganser — *Mergus americanus* — though they are commonly regarded as being somewhat like, and all three are called "mergansers," are in fact altogether different birds, and unite for the most part with Merganser to be named, is, for these, almost too much honor.

And now comes the next and description of the Shore Birds and New Fowl of the United States. A list is given of the various modes by which they are captured, and then we pass on to a rather division of our subject, the *hunting proper*, and wilder sports and animals of the Western States, and the great occidental wilderness.



## BAY SHOOTING.



Y this term I intend to designate the shooting of all those species which have been enumerated and described in the first pages of this volume as Bay Snipe, although, as I have before observed, with the exception of the Red-breasted Snipe—*Scolopax Nordberacensis*—known generally as the Quail

Snipe, or Dowitcher, and the Semipalmated Snipe, or Willet, there is not one among them which has even a pretension to be called Snipe.

All the different tribes which pass under this wholly inappropriate and inconsistent name, are, as we have seen, permanent dwellers during the whole year, with the exception of a brief period during the breeding season, of some or other portion of the United States. Wintering southward, they pass northward eastward during the spring, and almost before the summer is spent, are on the coast of Massachusetts, New York, and New Jersey, with their young broods.

In all these birds which visit these States on their way to breed in the spring and return in the autumn, there are far tamer and more settled, and make a much longer sojourn on our coast at the latter than at the former period, and from Boston Bay to Egg Harbor the shores swarm whenever there are appropriate feeding places, with these countless aquatic myriads.



Late in July all, with but few exceptions of these types, have assembled, and their numbers continue to increase, as fresh arrivals keep streaming from the great northern nursery, until the approach of Winter again directs them southward.

During their spring visit, comparatively speaking, these birds are unmolested, few persons troubling their haunts to shoot them while Brent are in the bays, and English Wigeon on the inland moorlands, but when they return, it is the very dearest season of the sportsman's year. Sings are away in the North, Woodcock are moultling, and quail hatching or leaving their young broods. The Upland Plover, it is true, is in season, and the Ring-bill, likewise, but the localities, in which only these two birds are taken, are few and far between, and where the shore birds must do congregating, are the very resorts in which the Winterrun Snipe, and the Snow-bird, are met.

Hencefore they are pursued eagerly, by the veteran and professional gunners, for they grow weary they neither by themselves, though with hardly an exception, but if there is a large enough party, and moreover, the shore birds offer themselves to be brought to take, and they usually find a market, by sportsmen and sportsmen, from the desire of excitement and the lack of every other sport.

Some persons who shoot well are content with this as amusement, as it gives no trouble, requires no fatigue, and no exertion, and, above all, it is so easy, that the shooting is easy work, and the bag often immense.

There is, however, something for those who regard the field sports. Some men regard the amusement as affected merely by the number of shots, others by the size of the game bag. For myself, I have both these elements of pleasure, these are required, the objects of the instruction of the mind, the physical or personal, and last, not least, the exercise of mind and body, and the quick motion.

To me, therefore, the shooting of all kinds of wild and water-fowl, in the bays and shores, with but one exception, is the



tamest and most tedious of sports, waiting at stands for Deer always excepted.

All wildfowl shooting, with that one exception—sailing for Hare—must be executed by ambush, not by pursuit; and, not being patient, to me lying in ambush is an insufferable bore, whether the result is to be the getting a hundred shots at Sand-pipers and Plovers, or some of a great terrified Hart or Hind.

To those who are fond of this sort of thing, however, the mode to be pursued, for which there are abundant opportunities, and excellent grounds everywhere, from Cape May to Montauk Point, and all in in Hudson Bay, is to sail forth at the fitting period of the tide, to conceal themselves either in a boat moored in a niche scooped out of a mud bank, or behind a screen of sedge or reed marsh, near some one of the little ponds which abound in such localities, and having set out a number of wooden decoys, shaped and painted like the various kinds of shore birds, as if they were feeding in the marshes, or wading in the little ponds, to await the approach of the flocks.

These, as the tide gradually rises, and successively covers the various feeding grounds which they frequent, begin to fly in great numbers, and as they pass the various leads or passages between the salt meadow islets, are lined down by the gunners, who possess rare skill in imitating the cry or whistle of every separate species, to the vicinity of the decoys, or stools, as they are technically called, over which they will hover within fifteen or twenty yards of the shooter's ambush, and among which they will select one decoy, and beg it to feed, unconscious of the deceit. In order to render this more effectual, some gunners are used to employ pretended birds which they invent, by the aid of small sticks, among the decoys, or to attach a wing-stopped bird to a peg among them, in order to call down his passing comrades.

Some of the species are whistled much more easily, and come down more readily than others, but the proficiency which some of the men attain in the art of deceiving, and calling down the various Sand-pipers and Plovers, is very striking, and with a good man, such as John Verity, Jim Smith's boy, the Baymen,



and others on the south side of Long Island, and others equally famous at Long Henton, in Eastern Devon, and other suitable places, a day's sport is really worth all the paper's worth.

The quantity of food which is consumed in the contest during the contest is generally less than you think it will be, because you do not water, and you have the consolation of filling your bucket with pleasant eatables, trying out of course to get a better, with a good deal of anything you please to render water drinkable. You may pass a summer's day agreeably enough without a shot either at water birds, or at heavy flocks, every ten minutes.

The greatest drawbacks to this sport, are the cramped position in which you are compelled to lie on a stomach stretched to several courses, the reflection of the sun upon the glossy surface of the water, which if you are in the least degree thick-skinned, is very sore to the eyes, and peels off every inch of exposed surface, and, lastly, the horses, mosquitoes and gnats which, when you are pretty thoroughly annoyed, will frequently come up to your nose, and get into your eyes, and will up to the water. If land, Downy, Mergansers, Yellowlegs, and Black-breasts.

It, however, despite all these evils, and others, is so pleasant to try the Snipe, get a good harvest, and have almost two years' time to wait for another crop, and I do not think I can give up, but then on these questions you will never have a second opinion, and you will not get into any more of these low and keeping tricks, you can only try the matter out.

Generally speaking, these birds are not difficult to kill, and if a flock comes directly up to your decoys and some excitement, on expanded wings, and on the water, and to which you cannot miss them, and can hardly fail to make great havoc in their crowded ranks.

Sometimes, instead of being assisted by the decoys, and the reflected companions, the simple birds will appear to be fascinated and attracted by the cries and fluttering of their wounded associates, and will rush over and over them, giving a chance for several shots, but nearly every day, except when



comes well over your decoys, which are not usually set above ten or fifteen yards distant, you should with prompt deliberation be generally enabled, after getting in your two first barrels truly, to catch up your second gun and do more or less execution with it also.

Especially single birds, or wary flights, will skate past your decoys without noticing them, or giving any heed to your imitation of their cries, at a long distance, and at a very great rate, and in that case you must shoot far ahead of the foremost bird, or you will leave no chance whatever of killing.

Written instructions can never mention or teach you what are the peculiar notes of the various species, much less how to imitate them, or how to distinguish what species it is that is approaching, by the order in its flight and the peculiarity of its motion, so soon as your eye catches it against the clear blue sky, and long before you can discern its colors, yet this you must be able to do with certainty, before you can yourself become a proficient at Ray Snipe-shooting. Long practice alone, and experience, can make you perfect in this. *Especially*, without knowing anything at all about it, having a good boy, nine, or more, years of age, spot. *He* *will*, however, when set to work, doing it all, is worth doing well, and if I thought it paid to shoot Ray Snipe at all, which I do not, I should decidedly quickly myself to recognize and worship, as I can now some time or there of the commoner species. After all, it is less difficult with a good tutor, than it would at first be considered.

The greatest difficulty, I think, that will be experienced by a beginner in this sport is that of correctly judging distances, the nature of smooth water being singularly deceptive, and the size of the birds, as it seems to me, being frequently augmented to the unpractised eye, by a misapprehension, or optical delusion, so that you would suppose them nearer than they really are.

It is not easy to give any general rule for measuring the distance of a head or tail wing, so greatly does the range of vision vary in various individuals; but with a person neither extraordinarily farsighted, nor on the other hand at all short-sighted,



perhaps as good a criterion as any, is the seeing the eyes of the bird at which you are shooting, of it be a time of any size. This I have heard old laymen speak of, as their test of a bird being within aim shot, though were I to wait till a Plover's eyes were visible to me, I should not fire a shot in a twelve month.

In this, however, as in every thing else connected with field sports, a little practice will soon give facility, and until that is obtained, as good a way as any for the tyro, is to look upon his layman in the light of a fugleman, and implicitly to follow his motions.

#### GUNS FOR BAY SHOOTING.

It is hardly to be expected that any person who is not entirely devoted to field sports, and goes to the trouble and expense of providing himself with a gun proper for every several kind of game, and mode of shooting, as it be should do so, he can scarce be completely armed with but a dozen pieces at the best. For sportsmen in general—except of course one for general work, and the other for to use mainly as well to collect—but it cannot be denied that every kind of game has its peculiar weight and calibre of piece better adapted than any other to do execution on it.

Thus for summer Cock shooting, when the woods are in leaf so that it is rare to fire a shot at above a dozen to twenty paces a short, light, long-barrelled gun would be as effective, perhaps more effective than any, and for harder in covert, and any onerous in hot weather, the same gun would be amply sufficient for Rail shooting. For any person who could afford it and would take the trouble of having different guns for every species of sport, for summer Cock shooting and Rail shooting I should recommend a gun not to exceed 26 inches length of barrel, and 12 gauge, with a weight of six and a half pounds



only. But this gun should not be fired with to exceed 1 oz. at the utmost of No. 8 shot.

For autumn shooting, spring Snipe shooting and the like, the piece I should recommend would be 32 inches barrel, 11 gauge, and from 7½ to 8 lbs. weight, and this I believe to be the most killing proposition that can be adopted, and by all odds the best gun for general shooting, and therefore the most serviceable and most appropriate for a man who uses but one piece.

For Bay Snipe shooting, or inland wild fowl shooting, a heavier piece is requisite, if we would do the greatest possible execution with a given gun, and for these purposes I would prefer a length of 36 inches with a weight of ten pounds, and a gauge of 12. I am still speaking of double guns.

But for large-fowl shooting, and especially at large flocks, I would by all means prefer a single gun, as a double gun of the requisite length and calibre would be wholly unmanageable if made of the proper weight of metal; and must consequently be made so light, preserving the true length and gauge, as to kick very severely, if not to be dangerous.

The heaviest shoulder gun that can be used conveniently and quickly, is from 13 to 16 lbs., and with this weight a length of 42 inches, and No. 7 gauge, 3 oz. of No. 1 or 2 shot can be thrown with the greatest possible effect, and will do more execution than larger shot. A is the biggest that should ever be fired from a shoulder gun, and if made in a green wire cartridge, will execute as far as can possibly be desired, even at Geese or Swans. The best wadding for Duck guns is thick felt wadding, and the best powder is that already named—Curtis & Harvey's *Howler's* Disking powder. A little less than the same measure which contains your charge of shot, full of powder, is the right charge for guns of all weights and calibres, according to the new and true system of heavy powder, light shot.

I am perfectly satisfied that one sportsman, using two such single guns as that here described, will kill double the quantity of game that will be brought to bag by another using a double



gun of the same or smaller caliber, with a weight of 20 pounds, which is the greatest that can be used by a very strong man easily, and which, even then, must necessarily be very close to the shoulder to throw away. And, that a model of 20 pounds is made out of a piece of gun for every three 10 pound guns. It is 16 inches if 25 inches for a double gun and second, that the lighter single pieces for more maneuverability as well as being effective.

Now, having described all these various forms and forms of guns, each most effective for some one kind of shooting, I will simply add in conclusion, that for all ordinary purposes, a single shot of all intents and purposes, with only well aimed, or very short of shooting, where even the ordinary gun of 16 lbs. weight 25 inches in length, and 14 gauge, and who keeps a single shot gun, such as have described above, or 20 lbs. or if he is a close and constant for shooting, the single shot is much better.

For the hunter I would prefer at the present time, my money, the best English gun that could be named, the Mauser, Wadsworth, Mauser and Wadsworth, New York, New York, London, when I consider the quality of it, it is the most perfect gun maker in the world. Mr. Partridge is a very good gun maker, but of late the quality of his guns has been very poor, the country are interested in power and quality, and even the remainder of old. For many years, he has been a very temporary business, of the nature of these are common to persons for whom the price was not high, and there is no doubt that they even orders a gun of any one of them, but a dozen London makers will be thoroughly well suited and satisfied.

Colonel Hawker has published in his great work a list of all the London makers, this, for many reasons, I consider wholly unnecessary in such a book as this, as few persons have the ability to order guns, without some knowledge of whom they are employing.

I would, however, here especially advise any American sports man to avoid purchasing English guns through the medium of American gun sellers, and still use the English American ones, as



the important houses. It is not too much to say, that a first-rate maker's gun is never but sold to the farmer, unless it comes into their hands second-hand, and to an accident; and that the work imported by the latter, and deposited at a retail store or retail, is the very worst style of Remondoupsmithwork gun-smithery. From Charles Lemmon, 1st New Bond Street; Joseph Long, 7 Haymarket, Wotton, Mass.; and William Gray, 28 Edgeware Road; Samuel Noyes, 19 Rensselaer Circus; James Purdy, 111 Oxford Street; and from the Messrs. Lane, Presumably, Parsy, Lancaster Square, and Munro, Dover Street; first-rate work may be procured for first-rate prices; and in the long run, I believe, to give such profits for such prices, will be found to be not only the best but the cheapest policy.

For the heavy Duck game, I unhesitatingly recommend Munro, of Dordsey Street, New York, as the true and cheap maker in the United States, by the other who to may. He will furnish complete Ducks, such as I have described above, that rightly has first author's style. Col. Hauke recommends, without any engraving or ornament, for seventy-five dollars, or perhaps less in metal. I did at last, such a gun of his make, on the dimensions given above, select any imported gun of any dimensions, which can be delivered in New York, for the same price. Furthermore, I would rather employ him to build me a gun of my style, not to exceed one hundred and fifty dollars in price, than buy any imported one at a New-York shop for one hundred and seventy-five, or import one myself at the same price. I have tested his work myself, and can speak to its excellence and durability. Chubb's, or Philadelphia, also makes well, and these two are the only makers in the whole Atlantic, whose work I would care to purchase for my own use.

For and miscellaneous imported gunsmith's work, as flasks, pointers, spare supply, powder, wadding, Elley's cartridges, or the like, Henry F. Casper, a few doors above Madison Lane, in Broadway, will be found a competent and complete purveyor. No one can go astray in sending orders for any supplemental fancy or out-of-the-way implements or materials of sportsman



slaps to him, as he will certainly be promptly and properly served.

I have tried metallic wadding for common fowling-powers, and think well of it, not having found it liable to the objection generally brought against it, that it scratches the interior of the barrel, which I believe to be impossible. Its advantages are, its small bulk, its portability, and its non-liability to become wet. Any cut wadding, made of pasteboard, free from glue or paste, is however as good as anything can be. For all shooting, but most of all, for sea-fowl shooting, Starkey's central fire caps, at five dollars the thousand, are the best copper caps, by a thousand to one, that are made. No degree of dampness or wet will prevent their instant ignition, and discharging their whole fire into the tube of the nipple, they do not corrode the exterior, and are the cleanest, quickest, and strongest implements of ignition I have ever tested. Despite the price, I use no others.



## FOWL SHOOTING ON LONG ISLAND.



HIS sport of which some persons become passionately fond, preferring it infinitely to Upland shooting, braving all sorts of weather, and incurring infinite fatigue in pursuit of it, is followed on the Long Island bays, for the most part, by two methods only both of which, like the last, partake

in all respects the nature of ambush, rather than of pursuit.

The common, and what may be called the old-fashioned mode, closely resembles that above described, under the head of Bay Snipe shooting, and consists in secreting a boat, containing one or more gunners, in a recess scooped out of a mud bank, and disguising it still further with sedges and sea-weeds, in a position commanding some favourite feeding ground of the Ducks and Geese, and anchoring a flock of wretched decoys at a proper distance from the station in the shallow water.

As the tide rises, the fowl move from place to place, coming from whither then becomes deep into shallower water, and *vice versa*, at the ebb, and as they fly to and fro, they are attracted by what they imagine to be a flock of their confederates, and sail down to hold colloquy with them, sometimes even settling in their midst, and giving the experienced gunner favorable opportunities of getting three or four barrels into the flock, and so doing deadly execution.

Canada Geese can often be induced to lower their flight, and stoop to the decoys, by the imitation, which is very accurately







as they will frequently let a bird run almost into the midst of them, before they will attempt to rise, and when they do so, as they usually face the wind in taking wing, they are compelled first to breast you, and then to present their side wings.

I do not doubt that Mr. Giraud is perfectly right when he states that this practice if persisted in, has a tendency to keep it in the times from their breeding grounds; and to some for the sake of preserving these, it may be advisable for those now having an interest in protecting them, to demonstrate the method. I cannot for my life, however, see a great respect to be superintending, nor for any exertion or any other, can I see even what there is sportsman in the matter, in my portion of our system of fowl shooting. Indeed, though it be well enough as a method of killing game, it is to me, not only dull work, however rapidly the shots may come in, to be cramped up on your belly in a coveit, or still worse, on your back in a coveit, in cold or humid weather, with the salt water freezing into ice on the quip, falls on your propped, or on a sweater, or in warm spring time, with the sun blazing down in your face, and reflected upward from the intense mirror of the liquid surface.

There is no accounting for tastes, however, and certainly no true sportsman will take much heed of the fatigue, or roughing of any kind, to which he must submit, in the pursuit of his favorite game. If less discomfort, there is more toil by half in the fowl-chasing, whether it be winter or summer, than in doing fowlsheaves. I come the least of excrement, and the sameness of position, &c. &c. is great drawback to the sport: I have learned, moreover, to respect the tastes of all men, and to deprecate no kind of pursuit, especially one which has so many ardent and enthusiastic adherents, as our Island fowl-shooting.

I need not hint, however, of degenerate sportsman, and a poor description of a distant weathered I have done to the sport ourselves, and recall distinctly in the eloquent descriptions of my poor friend, J. Cyprian, junr., replying to narrate how he and Ned Jones "could each cut down a fair-sized fly by a point of land before a strong north-wester, sixty yards



off, nineteen times out of twenty. "That is a fact," quoth he, "and there are not many men, beside us and John Verity, and Rayner Rock, who are up to that performance. Uncle Ben Rayner could do it once, and Dan thinks he can do it now, but, as Peter Probusen says, 'I have no doubts.' Multitudes more sportsmen may shoot well, but none but a man of true genius can shoot *ably*. Shooting, in its highest and truest sense, is not an acquired art; a man must be born a shot, as much as he must be born a poet. You may learn to wingbreak a starved pigeon, sprung out of a trap, fifteen or twenty yards off, but to stop a Cock in a thick brake, where you can see him only with the eye of faith, or to kill a vigorous Grouse, cutting the keen air, *à drybreak*, at the rate of three miles a minute—requires an eye, and a hand, and a heart, which science cannot manufacture. The doctrine of Play, the naturalist, contained in his chapter on Black Ducks, is correct beyond a question: "*Le pige se vole et le perdreau se pique*," and *optime collimate et fus*." Reading and writing are inflicted by schoolmasters, but a crack shot is the work of God.

" 'Them's my sentiments,' as Peter says in ways."

And Heaven defend that I carry them should deprive the sport which can inspire 'them sentiments' in a writer. "Poor fellow!" whether he were a true shot or not, a sportsman he was born a poet, the very fountain of American field sports and sportsmanship. Hear with what strains the flight of Canada Geese inspired him, and themselves, gentle reader, were by no means the largest sense of the word, born a poet:

"They come, they come the plying fowls, with pennon fierce and strong,  
On clouds they leap, from deep to deep, the vaulted dome along;  
Heaven's light house, in a column of white upon the pole;  
There ever seen, no never green, or under the horizon,  
Such disciplined battalions the school in your eye,  
Around her ancient sails, let old Terra proudly roll,  
But the waving flag never is so at right or wrong will wave your soul

"Hark! hark! and forward to the Northward, to the trumpet tone,  
What Geese run lag or feather flag, or hark the gaudy hoan,  
Hark! onwards to the cool blue lakes where in our safe have bowers,



No stop, no drop of screen brine, nor need, nor blue light lay,  
 Our travelling workman is, 'our water, our geology, and our glarp'  
 Diamonds and Labrador for us are strewed with flowers,  
 And not a brand on man's shall rest, until the human is gone.

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And here I was about to follow the above with a description of my own, of battery shooting, as practised in the Long Island bays, but especially in the neighbourhood of the Five-Islands; but in hunting up the spirited verses quoted above, in an old number of the *Fish Register*, I hit, by accident, on an extract so strikingly correct and graphic, that I have not been able to refrain from quoting it, although I cannot give the name of the author, who has appeared to subscribe himself by the euphonious title of a rock-doliver.

"Reader—gentle one will not term you, as the epithet is so completely identified in our mind with the idea of a spruce young gentleman, besuited redolent of Old Macintosh, and his legs invested in primrose-colored kilt, that we will not insult you by applying it—reader, then, leave you, in your various wanderings over this habitable globe, to yet enjoy one of the most exciting of all amusements—a good dry's wild-fowl shooting! If such has been your fortune, does not the sight of the dignifying at the commencement of the present number recall at once to your recollection many an excellent dry's sport? Can you not fancy yourself once more at *don Smith's*, on *Fine Island*, lying in your boat, your finger on the trigger, and waiting with a beating heart for the approaching flock to decrease the distance by a few yards more, before you open into their close column, making fire four or five or six double barrels? We know that you can, and therefore shall leave you to fight your battles old and new, and your own companions against the unsuspecting Ducks, while we separately proceed to enlighten the understanding of your fellow-craftsmen with a few remarks on the science of wild-fowl shooting.

The principal place for the export of this sport is the neighbourhood of New York, including Long Island; and from Montauk to Jamaica, the southern coast being deeply indented by bays.







in motion by the gentle ripple, which almost invariably curls the surface of the bay, with their heads all turned to windward, they might very readily be mistaken, at a short distance, for a flock of wild-bird, so complete is the deception. When the business of trying out the birds is accomplished, the next thing is to get into the machine itself, an object of no little difficulty, from its treacherous nature, being balanced almost even with the water's edge, and the distance to which the boards project from the sides. When this is at last achieved, he places his gun and ammunition by his side, and extends himself at full length in his floating box, while his companion paddles off some distance, to await the event, and remain in readiness to pick up the game.

"In the meantime morning is slowly breaking. The whole sky assumes a kind of sallow tint, under the influence of which the distant gull appears magnified to twice its size, as it wheels over the waters in search of prey; at last a small dark line appears in the distance, moving swiftly across the sky. Each moment it grows more distinct, until at last the eye can plainly trace the form of the birds of which it is composed, and the certainty that a large flock of Brant are rapidly advancing, sends a thrill of delight through the frame of the expectant toiler. They approach within a hundred yards—then, as if suspicious, wheel with a hasty glide and retreat; but an excellent imitation of their note again attracts their attention. Once more their course is directed towards their hidden foe; on they come, sailing with outstretched wings—they are almost over the stand, when, starting to his knees, the occupant of the battery raises his gun to his shoulder, takes them on the turn as they are huddled together, and by a rapid discharge of both barrels, strews the water with the dead and dying.

"Such is shooting from a battery, and we would only remark in conclusion, that if meted by our remarks, or the evil demon of curiosity, any young gentleman should ever find himself engaged in one of these machines some cold November morning, we would merely recommend him to provide himself with thrice the patience of an ogre, and as these worthy bar-baren



of 15 pounds can equal stock with that of a justly celebrated company, as it is good of figure—and he served in a high office in Wall Street, he may be expected to discover the exact quantity required."

This venerable writer, in a later portion of the same article, in speaking of the ordinary method of shooting described heretofore, states that, "The best gun, you can now get, is double barrel, of short or medium in the barrels, and 7 gauge, which, if suitably made, will carry a quarter of a pound of shot six or eight hundred, and still be sufficiently tight to make you to know, over a single lead going with the wind, at sixty or seventy yards, with as much ease as you ever floated a Woodcock in July."

With regard to this, I have only to observe that George Henker, who unquestionably knows more of the art of gun-making than all that pertains to it, from any living man, and brought up to the trade, and whose devoted attention to water-bug-baiting, and small-calibres, heavy metal and heavy charges, has distinctly stated that "the proper length of a double-gauge gun is forty-four diameters, or 2 feet 8 inches, in length, and a double gun of 7 gauge, the same length, being 14 diameters above—and of 14 pounds weight should carry four ounces in the barrel—being considerably more than forty-four diameters, which would give but 1 foot 2 inches length."

For 9 gauge, therefore, a foot 2 inches is amply sufficient, greatly exceeding forty-four diameters.

Again, the weight of a single gun of 7 gauge being 15 pounds, a double gun of 9, and the same length, ought to be at least 20 pounds, and we greatly doubt any gentleman knowing over a single lead, going with the wind, at sixty or seventy yards, with a 20-pound gun, as easily as he could float a Woodcock in July.

Yet, once again, the Colonel says, that a gun, to carry 3 ounces of shot, which he elsewhere states to be 7 gauge, should not weigh less than 12 nor above 15 pounds; whereas, one to carry 4 or 5 ounces of shot should not be less than 15 or 20 pounds, whereas this writer recommends the firing 4 ounces of shot over



of each barrel of a gun, either barrel of which will only weigh, at the outside, 10 pounds, and 1 pound, judging from his remark concerning its handiness, he would make it much lighter. The same ratio would give a charge of 3 ounces to the 11 pound gun, which Colonel Hawker holds must to carry above 3.

A gun so built and so loaded, would be positively dangerous, and one properly built to carry 4 ounces of shot from each barrel, without recoiling, should weigh from 12 to 16 pounds, a weight which cannot be discharged without a rest.

Observe, also, that an over-loaded gun not only kicks, but by forcing back the contents, and overstrains.

It is for these reasons that I have recommended the use of two 7 gauge, 12 inch, 11 pound single guns, infinitely superior to any double gun that can be held out. They will carry one third more shot, and that two sizes larger, to almost double the distance, besides being twice as handy.

Hawker's scale of shot is No. 3 to 1 for guns of 10 or 12 gauge, 2 ounces, 1 to A for guns of 7 gauge, 3 ounces; A to B for guns of 5 gauge, 4 or 5 ounces.

And you may rely upon it, that larger shot and larger charges will produce no good effect, besides hurting the shoulder, and perhaps bursting the gun. Remember that for very long shots you should increase the quantity of powder and reduce that of shot. To kill wild-fowl, cross-shots at long distances, going before the wind, you should either keep the gun moving in the direction of the bird's flight, *after the trigger is drawn*, if you aim directly at your mark; or you must fire from 2 to 3 feet in front of the fowl, according to its distance and rate of locomotion.

I will only add here, that, through all the varieties of Duck and Goose I have enumerated and described above, are killed in greater or less abundance on Long Island waters, by far the most plentiful, and with exception of the Brand named, the most esteemed, are the *Common Goose*, the *Ring-necked Goose*, the *Scaup* or *Barrow's*—which is a very indifferent bird—and the *Red-head*, which is by far the best of all, though far inferior to the



same bird when killed in the Potomac. The CANYON-BACK, killed on the bays, is a worthless bird, and it is a singular fact, that, although greatly superior to the Red head, when both can obtain their favorite food, the *Limosa americana* it is rare as far inferior to it. This brings me to food shooting, as it is practised on the waters of the Chesapeake Bay, which abounds with all the finest varieties of wild-fowl in their finest condition, above any other region of the known world, and on which more sport is enjoyed by gentlemen, and more foul slain by professional gamblers, than in any other waters of America, from the noble and glorious Swan, down to the tiny Diver.

But here, as I have never enjoyed an opportunity of participating in this delightful recreation, I quote an admirable description of the sport furnished by Dr. Sharpless, of Philadelphia, to Mr. Audubon, and by him inserted in the "Birds of America."



## CHESAPEAKE BAY SHOOTING.



THE Chesapeake Bay, with its tributary streams," says he, "has from its discovery, been known as the greatest resort of water fowl in the United States. This has depended upon the profusion of their food, which is accessible on the immense flats or shoals that are found near the mouth of the Susquehanna, along the entire length of North-east and Elk rivers, and on the shores of the bay and connecting streams, as far south as York and James rivers.

"The quantity of fowl of late years has been decidedly less than in times gone by; and I have met with persons who have assured me that the number has decreased one-half in the last fifteen years. This change has arisen, most probably, from the vast increase in their destruction, from the greater number of persons who now make a business or pleasure of this sport, as well as the constant disturbance they meet with in many of their feeding grounds, which induces them to discontinue themselves more widely, and forsake their usual haunts.

"As early as the first and second weeks in October, the smaller Ducks, as the Buff-head,\* *Anas boschas*; South-american, *A. americana*, and the Ruddy or Heavy-tailed Duck, *A. Rubra*, begin to show themselves in the upper part of the bay; and by the last of the month, the Black-head,† *A. sacra*; Wild-

\* Long-tailed Duck.

† Scap Duck.







that I have seen *Cautassabacks* burst open in the breast when falling on the water: and spending less time in feeding, they pass up and down the bay from river to river, in their morning and evening flights, giving us certain localities great opportunities for destruction. Their purpose, even in their short passages, very much the order of their migratory movements, flying in a line, or horseless train, and when the wind blows on the points which are in the line, the sportsman has great chances of success. These points or courses of the Ducks are materially affected by the winds, for they avoid, if possible, an approach to the shore, but when a strong breeze sets them on to this, protracted by the land, they are compelled to pass within shot, and often over the land itself.

"In the *Susquehanna* and *Elk* rivers, there are few of these points for shooting, and their success depends on approaching them while on their feeding grounds. After leaving the eastern point at the mouth of the *Susquehanna* and *Turkey Point*, the western side of the *Elk* River, which are both moderately good for flying shooting, the best place of non-fishery is the Narrows, between *Spoats* Island and the western shore. These narrows are about three miles in length, and from three to five hundred yards in breadth.

"By the middle of November, the *Cautassabacks* in particular begin to feed in this passage, and the entrance and outlet, as well as many intermediate spots, become very successful stations. When taken farther down the western shore is *Taylor's Ford*, which is situated at the mouth of the *Rumney*, and *Abney Island* at the mouth of *Brush River*, which are both excellent for the Ducks, as well as *Sparrows* and *Geese*. The cause of the most successful points, where birds feed are met with, and proper as well between deep coves, where immense numbers of *muskrat* tails find their passage, presents advantages. Two worth going to *High River* and *Lemon's Point*, and *Robbin's* and *Ricks* at *Potomac*, and *Compound River*, are fruitful localities. Important stop at the mouth of the river is situated *Charles's Island*, which has long been known as a great shooting ground, and is



in the mortgage of a company at a high rate. Maxwell's Point, as well as some others up other rivers, and even farther down the bay, are good places, but less celebrated than those I have mentioned. Most of these points are good collecting grounds for companies and individuals, and they are esteemed so valuable that intruders are severely treated.

It has been ascertained that disturbing the bay, on the feeding flats is followed in most cases by them forsaking these haunts, and seeking others, hence, in the rivers leading to the bay even flying points, they are never annoyed by boat-docking, either by night or day, and although the discharge of guns from the shore may arouse them for a time, they soon return, whereas a boat on sail in these few hours will make them forsake a favorite spot for days.

From the great number of ducks that are seen in all directions, one would suppose that there could be no doubt of success at any one of the points in the course of flight; but whilst they have an unobstructed vision as to distance, and well-managed space, unless attending circumstances are favorable, a position may be days without a promising shot. From the eastern side of the bay—and it is there that the best grounds are found, the southerly winds are the most favorable, and if a fresh tide is attended by a smart frost and much snowed or even with morning, the number of birds at any one time is almost incredible, and they approach the points so closely that even a moderately good but inexperienced fowling man could kill a dozen. This has often occurred, and I have seen eight or ten canvasbacks killed at one discharge into a flock, from a small gun.

To a stranger visiting these waters, the numerous ducks, feeding in flocks of the sands, or filling the air with their screaming, with the great numbers of beautiful white swans resting near the shores, like trunks of driven steam, might induce him to suppose that the facilities for their destruction were equal to their profusion, that with so large an object in view, a sportsman could hardly miss his aim. But when he considers the great thickness of their covering, the velocity of their flight, the



rapidity and duration of their diving, and the great influence that circumstances of wind and weather have on the chances of success, it becomes a matter of wonder how so many are destroyed.

The usual mode of taking these birds has been, till recently, by shooting them from the points during their flight, or from the land or boats, on their feeding grounds, or by *decoys*, as it is strangely termed, an operation by which the Ducks are sometimes induced to approach within a few feet of the shore, from a distance often of several hundred yards. A spot is usually selected where the birds have not been much disturbed, and where they feed at from three to four hundred yards from, and can approach to within forty or fifty yards of the shore, as they will never come nearer than they are swimming freely. The lugger the ruder, and the calmer the day, the better, for they feed closer to the shore, and see more distinctly. Most persons on these waters have a race of small white or liver colored dogs, which they familiarly call the *shore hounds*, but which appear to be the ordinary poodle. These dogs are extremely playful, and are taught to run up and down the shore, in sight of the Ducks, either by the motion of the hand, or by throwing chips from side to side. They soon become perfectly acquainted with their business, and as they discover the Ducks approaching them, make their jumps less high till they almost crawl upon the ground, to prevent the birds discovering what the object of their curiosity may be. This disposition to examine rarities has been taken advantage of by using a red or black handkerchief by day, and a lantern one by night in taking, or even by greatly splashing the water on the shore. The nearest ducks soon notice the strange appearance, raise their heads, gaze intently for a moment, and then push for the shore, followed by the rest. On many occasions I have seen thousands of them swimming in a solid mass direct for the object, and by removing the dogs farther into the grass, they have been brought within fifteen feet of the bank. When they have approached to within thirty or forty yards their curiosity is generally satisfied, and



after swooping up and down for a few seconds, they retrograde to their former station. The moment to shoot is while they present their sides and feet, as in the Duck game, not their heads and tails. The Blue-winged Golden Plover is mastered by them the Red-heads, next the Chukars, and last the Red-pates entirely. This also is the ratio of their approach to the point of flying, although, at the first, the time taken for determining the direction, for circumstances may change the matter. The total absence of cover or protection against exposure to sight, or a large fire, will not turn these birds aside in such measure. In flying shooting, the Red-pates are great runners, for they are so shy that they not only stop the points in their way, but by their wheeling and confusion of flight at such times with others.

Simple as it may appear to shoot with success into a great mass of ducks sitting on the water, it is not at all a trifling feat. I have twice yet when, under the best of conditions, I have poured a volley over with a failure, the cause I suppose being that the birds were composed of smallish individuals, being some of the species that are ten feet in width. To give it more to the point, I have been across the object of my endeavor in that I have shot, and will be in perfect belief that the birds, whether they were on refuge, or even the commonest species, were so shy. The reversions of this principle I would not mention, but in one, when I had found enough in time to get to within a good range of a great flock of Red-heads, I was so much surprised that I was not able to come near them. I had shot, and was a good deal out of the habit of shooting, and I was so much into the business of the day that I was not able to get a heavy well-proved Duck gun.

It would have been a sad case of a shooting party if it were not for the fact that took place in the River a few years since. A man whose name was forgotten, and the name, I am sure, is not in the list of the living, observed that the day was "hot" and explained upon a spot of land of twelve feet in diameter about eighty yards from the shore, nearly opposite the house. The spot was full of



ducks, and with a heavy gun he fired into it. Many were killed, and those that flew soon returned, and were again and again shot at. Till fearful that he was injuring those deeply his own, he ceased the massacre, and brought on shore ninety-two ducks, most of which were Canvas-backs.

"To prevent the ducks from running in whilst toling, they are not allowed to bring out the Ducks, but another band of large ducks of the Newfoundland and Water-spined mixture are employed. These stand, whilst toling is in progression, or at a point, tolerably as much interest in success as the sportsman himself. During a flight their eyes are incessantly occupied in watching from whence the handsome, and I have frequently seen them, indicate by their swimmer, the approach of a flock, so that that the human eye would have overlooked it. As the Ducks come on, the dog lies down, but still closely observes them, and the moment the discharge occurs, jumps up to see the effect. If a Duck falls dead, they plunge to bring it; but many of them wait to see how he falls, and whether he swims, and they seem to be as aware as the gunner, of the improbability of capture, and will not make the attempt, knowing from experience that a land merely winged, will generally save himself by swimming and diving. These dogs usually bring one Duck at a time out of the water, but a real Newfoundland, who went with me and my company this autumn, was seen on several occasions to swim twenty yards farther, and take a second gun's mouth to carry on shore. The undulating style and animation of these animals are remarkable, and a gentleman informed me, his landowner's dog being, in the space of one hour, twenty Canvas-backs and three Swans from the water, when the weather was so severe that the animal was covered with snow, and the people were freezing, he took his great coat to envelope him. Some dogs will dive a considerable distance after a Duck, but a cropped Cheviot-bark, or Black-leg, will swim so far under the water that they rarely can be caught by the dog, and it often has been observed, that the moment one of these Ducks, if merely winged, reaches the surface, he passes



under, and however calm, cannot be seen again. To give an idea of the extreme rapidity with which a Duck can dive, I will relate an occurrence which was noticed by myself, and a similar one was observed by another of the party the same day.

"A male *South-amberly* was shot at in the water by a percussion-gun, and after escaping the shot by diving, commenced his flight. When about forty yards from the point, he had acquired an elevation of a foot or more from the surface. A second percussion-gun was discharged, and he dived from the wing at the flash, and though the spot of entrance was covered by the shot, soon rose unhurt and flew.

"*Canvas-backs*, when wounded on the streams near the bay, instantly direct their course for it, and there assemble among the grass on the shores till cured, or destroyed by Eagles, Hawks, Gulls, Foxes, or other vermin, that are constantly on the search. If a dead *Canvas-back* be not soon secured, it becomes a prey to the Gulls, which rarely touch one another, and I have seen severe contests between opposed *Canvas-backs* and Gulls, and although a pair or two generally put up a further resistance, sometimes they are driven off. If two birds are remarkably strong, the Gull makes some noise that others are soon collected when possession is determined by courage or strength.

"Another mode of taking Ducks consists in placing galing nets under water on the feeding grounds, and when they dive for food, their head and wings become entangled in the meshes and they are drowned. This plan, though successful at first, soon drives the birds from these places, and in some cases a few applications have entirely prevented their returning. Paddling upon them by night or day produces the same effect, and although practised to some extent on Bush River, is highly disapproved of by persons shooting from points. For the last three years a man has been occupied on this stream with a gun of great size, fixed on a swivel in a boat, and the destruction of game on their feeding flats has been annihilated, but consequently is the plan, that many seasons have been privately proposed of buying his boat and gun, and he has been told it will



balls so often, that his expeditions are at present confined to the night. Sailing with a stout breeze upon the *Geese* and *Scurra*, or throwing rifle balls from the shore into their beds, is sometimes successful.

"Moonlight shooting has not been a general practice, but as these birds are in motion during light nights, they could readily be brought within range by 'honking' them when flying. This sound is very perfectly imitated at Egg Harbor; and I have seen *Geese* drawn at a right angle from their course by this note. They can indeed be made to hover over the spot, and if a captive bird was employed, the success would become certain.

"Notwithstanding the apparent facilities that are offered of success, the amusement of Duck shooting is probably one of the most exposing to cold and wet; and those who undertake its enjoyment, without a courage 'screwed to the sticking point,' will soon discover that 'to one good a thousand ills oppose.' It is indeed no parlor sport, for after creeping through mud and mire, often for hundreds of yards, to be at last disappointed, and stand exposed on points to the 'peking rain, or more than freezing cold,' for hours, without even the promise of a shot, would try the patience of even Franklin's 'glorious noddie.' It is, however, replete with excitement and charm. To one who can enter on the pleasure with a system formed for polar cold, and a spirit to endure 'the weary toil of many a stormy day,' it will yield a harvest of health and delight that the 'rangers of the woods' can rarely enjoy.

"Although this fat-tailed bird was named by its discoverer after the plant *Fabowar Americano*, on which it partially feeds when on fresh waters, its substance is by no means dependent upon that species, which indeed is not extensively distributed, but is chiefly derived from the grass-mat, or eel-grass, *Zostera marina*, which is very abundant on the shallows and flats along the whole seacoast. Its flesh seems to me not generally much superior to that of the Pochard, or Red-head, which often mingles in the same flocks; and both species are very frequently promiscuously sold in the markets as *Canvas-backs*."



I have not taken the liberty of extracting a single page from my friend Mr. Potter's edition of Hawker's work on shooting—an edition, which is rather a new one, but, with a few necessary additions to it, and from which I must have been enabled to have largely had not I been prevented from doing so, but I am happy to have it in the most degree authoritative and trustworthy case. I eagerly take this occasion of recommending it to my readers as a work of rare authority, especially on all matters relating to gunnery, and to Western sport.

The editor of the American edition of Colonel Hawker's work is greatly indebted to Henry Dwight Chapin, Esq., of Batumore, for the valuable original contributions on the subject of *Chimys*, or *Jack Duck* shooting. Mr. C. is known throughout the country as a gentleman and enthusiastic sportsman of twenty years' standing.

The season of shooting has much to be said and commences with the arrival of the head waters of the Chesapeake Bay, on or about the first of November, and continues a fortnight or two months, and for 2000. The birds are not to be seen at close quarters, as in the case of ducks. Indeed, it is not till about the middle of January, February, and March, that they descend the bay, and their numbers are so great that they have been driven by the ice, from the bay, into the Chesapeake, where they abound in the water every year, and where they impart the most delicious flavor to a fine decoction of that beer, upon it.

The usual mode of shooting them by sportsmen is upon the wing, as they pass a point, or a narrow neck of land, which they often do in flocks of 50 or 60, or even 100, and to another. The best guns used are of single calibre, from No. 12 to No. 7 gauge, and the shot of the size No. 4 or 5. The powder must be ground, to obviate the recoil, that necessarily causes if fine grained should be used.

Batman are not classed as men, partners, but sport for men, who make the greatest havoc with this game. They silently, in the night-time paddle or scull small boats into the very midst



of large flocks, or herds of Ducks, whilst they are feeding, and with a tremendous force, mounted on a swivel in the bow, slaughter immense numbers, often killing eighty or an hundred at a shot. This mode of destroying them is restricted by legislative acts, under severe penalties, but the difficulty of capturing or convicting these poachers is such, that most of them escape the penalties of the law, and pursue their unhaltered avocation, notwithstanding the greatest efforts to apprehend them, and their only punishment is the repeated anathemas and just indignation of all true sportsmen.

"There is another mode that is sometimes practised, which, though not quite so objectionable as the last, is seldom resorted to by gentlemen that shoot for pleasure, and is not permitted on grounds belonging to clubs. It is called 'tobing.' A small dog, about the size and color of a Red Fox, is made to gambol upon the shore, playing with sticks or stones that are tossed toward him from the gunners, who are lying concealed by a blind. The attention of a flock of Ducks that may be feeding within the distance of one hundred, or two hundred yards, is soon arrested, and they are simultaneously attracted by the antics of the dog, and with one accord swim rapidly toward the shore, as if charmed."

The only kind of wild fowl shooting which now remains to be described, is one very lately practised in this country. I mean what is usually called *pouze-shooting*, with a stanchion or snare-gun of enormous size. This mode has been adopted on the Chesapeake, but the use of the large gun is so unpopular, that it has been almost entirely abandoned. On the Hudson, a gunning point of this kind is used by one gentleman, who kills immense quantities of Ducks, with perfect success.

The most descriptions for a gun of this kind are stated by Colonel Hawley, with whom this is, of all others, the favorite kind of shooting, to be, length of barrel from seven to nine feet, bore from one inch and a quarter, to one inch and a half; weight from seventy to eighty pounds. The barrel should not



be absolutely confined below, but should be fitted with a rope hitching ring, extending from the butt of the gun to the stem of the punt, where it is secured. The gun fired with such a hitching ring, will recoil as far as the rope will stretch, say one or two inches, and will then spring forward about a foot, unless checked by a notch in the stock, which should butt against the running bench. The butt of the piece should be well padded, to relieve the shoulder from the shock. Such a gun may be fired with two ounces of Coates and Harvey's best coarse powder, and a pound of shot; the best sized shot is from No 2 up to No 1, for Ducks—A or AA for Geese; or cartridges of 8000 or above a hundred yards. The best wadding is a tight-wound ball of the best picked oakum. Mercurial ointment is as good a thing as can be used, to prevent the rusting of guns from the effect of salt air, or salt water, but I am informed that Mr. Mullin, of Ranslay street, has a variety of his own invention, which is perfect.

To fire these guns you must lean heavily with your shoulder against the upper part of the padded butt, taking care not to let your shoulder touch the butt, or your cheek the stock. All the fingers of the trigger hand must be kept below the guard. Your left hand should be placed over the butt, to regulate the use of aim, and your cheek should just graze the back of the hand. A little elevation must be given for the springing of birds at one flush, much they will perceive before the shot can reach them, and a good deal of practice is necessary, particularly in firing long cross shots at flocks, where it is sometimes necessary to allow a yard elevation and to shoot as much as ten yards ahead of a fast flying flock.

The advantage of a stanchion gun over a common shoulder Duck gun, is much greater than that of the latter over a common sporting gun. They are used universally on the coast of England.

The punt, or canoe, must be as flat as possible, and as low in the water. The gunner lies flat on his breast on the bottom, when working up to birds, and paddles the vessel through two



small hatches cut in the gauze. This method of shooting is, however, so little used in America that but brief mention of it will probably be regarded sufficient. Few persons, in the west, who are desirous of gaining skill and success on this subject, waste everything that can be put concerning it into the mouth of their dogs for the amusement of the hunt, or Hunter's work on shooting.

In working to birds, Birds always endeavor to go to them *apart* as the birds are very ready at taking the alarm, whether from their discovery being perceived, or danger, or some alarm, by their sense of smelling, or some I never believe to be the case, by the wind carrying the sound to their ears, in case of your attempting to work to them, and so workward.

The best color for the gunner's boots, and for the gunner's clothes, is white, all times, especially on dark night, or in snow, unless the sun or moon are shining very bright, when white will show too much, and dark, both for the dress and coat, is preferable. A black hat must on no account be worn, but a cap of the same color with the dress.

It is desirable to carry a common light gun in the boat, for shooting crippled and wing-broke fowl, which will save much time and trouble; and a large-muzzled shot landing-net, will greatly facilitate the bagging the dead birds.

Fog, snow, or heavy weather, is very bad for sea shooting, as it makes every object on the water look large and black, and causes the birds rapidly to take alarm, except in the case of the *eximius* Kent, which apparently becomes confused, and will often be quiet till the boat is pulled almost upon them.

This direction will probably prove sufficient to enable any person, who desires to try this very killing and destructive method, to meet with success after a little practice, but certainly if he be bent on practicing it to the utmost, he should not be without Foster's edition of Hensley, who is the prince of authorities on this topic. And this brings me to a nobler division of my subject—the Wild Sports of the W. Harriers.



## WILD SPORTING OF THE WILDERNESS.



**U**NDER this title I include all that is generally termed hunting; all, in a word, that is executed with the rifle instead of the shot-gun, with the Horse or the Hound, instead of the Setter or the Spaniel. Hunting, at the time, comprises, with packs of the best Hounds, a hunt in view, by mounted hunters, was hardly known to exist in North America. Although the towns were smaller, and the woods kept up and treated in perfect English style, the Mounts supported principally by collections of the game. It was well maintained during the short season, and was even, given great sport and fine runs. Many gentlemen in the Southern States keep packs of Hounds for the pursuit both of the Deer and the Beavers, and when the ground is practicable, hunt them well and thoroughly, but the woody nature of the country, and the unwillingness of the game to break cover and traverse the open, rendering nearly impossible to keep near the Hounds the superior ability of which, is to drive the animal across the stand of the ambushed hunter, and allow him to do execution, not with his twenty rifle, or his full charge of buckshot.

In old times a pack of Foxhounds was kept at Elizabethton,



town, in New-Jersey, by a brother of the gallant Commodore Decatur, but it has long since been given up, and no other now exists, I believe, regularly hunted in the United States. The Fox is not, therefore, considered in my light but that of vermin, and is pursued merely for the sake of destroying a noxious animal, generally on foot, with a few heavy southern Hounds, and the gun.

The animals, therefore, which are pursued in the sports of the wilderness, are the noblest, the largest, the fleetest, and, in one instance, the fiercest in the known world.

They are,

No. 1. THE BEAVER, *Bea. Americanus*, vulgar *Esquimaux*.—Ranging west of the Mississippi and Lake Winnipeg, as far north as 62°, and west of the Rocky Mountains, as far north as the Columbia River.

No. 2. THE AMERICAN FOX, *Citellus Canadensis*, the *Wapiti*.—A few are found in the remote parts of Pennsylvania, but with this exception, it ranges only west of the Mississippi, to the 40th or 50th parallel of north latitude.

No. 3. THE MOOSE, *Cervus Alces*, *Olaguel* of the *Canadians*.—Ranging from the great Lakes to the extreme North. They are now rarely found west of Maine, and even there are becoming rare, although a few are still found in the southern part of the State of New-York.

No. 4. THE CARIBBEAN, *Cervus Tarandus*, the *Caribou*.—Eastward of Maine and northward of the great Lakes to the Arctic Ocean.

No. 5. THE CANADIAN DEER, *Cervus Virginicus*.—Found every where from Canada and the Bay of Fundy to the Orinoco.

No. 6. THE BLACK-ANTLER DEER, *Cervus Alutatus*.—West of the Missouri to the Rocky Mountains.

No. 7. THE ANTELOPE, *Antelope Americanus*, the *Prong-Horn*.—West of the Mississippi to the Rocky Mountains, and so far south as the Hudson Bay Company's trading fort called "Carlton House."







erpt in the vicinity of a few of the larger western cities, utterly unknown and unpractised.

If these five animals, I shall proceed to give brief geological descriptions from the best authorities, and shall then close this volume and the work, by a short narrative of the various modes and times of pursuing and capturing each western animal, reserving only space for a few hints on the fish and fishing of the continent, and for a small appendix on various things regarding field sports generally, which could not properly be introduced under special heads, or which have casually escaped my attention in the body of the work.

### THE BISON—VULGO, BUFFALO.

*Bos Americanus*; *Genet.* *Taurus Merionius*, *Richard Mer.* 587. *Taurus Vaccarque*; *Red. Ann.* p. 10. *The Buffalo*; *Catolog.*, *Class.* 48, tab. 20. *Beef Savage*; *Dupontz*, *Inventory*, ii. 16. *American Bull*; *Penn.*, *Quadr.*

"From other species of the 4th kind, the Bison is well distinguished by the following peculiarities. A long, shaggy hair clothes the four parts of the body forming a well-marked beard, beneath the lower jaw, and descending behind the knee in a tuft. This hair grows on the top of the head in a dense mass, nearly as thick as the extremities of the horns. Over the forehead it is closely curled, and matted, so thickly, as to render the force of a rifle ball, which either retumbla, or lodges in the hair, ineffectual, causing the animal to shake his head as he heavily bounds along.

"The head of the Bison is large and ponderous, compared to the size of the body, so that the muscles for its support, necess-



rately of great size, gave great thickness to the neck, and by their origin from the prolonged dorsal vertebral processes, from the posterior projection called the *saag*. This hump is of an oblong form, diminishing in height, and becoming more or more considerable obliquity to the line of the back.

Thereyond the dorsal caudals, rounded behind, the fins are black and very thick near the head, whence they curve upwards and outwards, rapidly tapering towards their points. The outline of the fin is convexly curved, and the upper edge, on each side being papillose within, divides and extends downwards, giving a very oblique appearance to the lower edge of the mouth, in this particular resembling the ancient architectural bas-reliefs representing the heads of oxen. The physiognomy of the *Rison* is menacing and ferocious, and no one meets this animal in his native haunts, for the first time, without feeling an almost instant impulse to his preservation. The same movement of the fin is different from his winter dress, rather by difference of length than by other particulars. In summer from the shoulders backward, the hinder part of the fin is terminated with a very short fin, an almost insignificant appendage to the back, as velvet. The fin is perfectly smooth at the anterior end, and its utility as a fly-whisk is consequently very limited. The color of the fin is uniform, and, but the color of the anterior parts of the body, is of a uniform extent, varied with yellowish or rust color. These animals, however, present so little variety in regard to color, that the natives conceive any remarkable difference from the common appearance resulting from the immediate antecedence of the drought period.

Some varieties of color have been observed, although the stations are rare. A Mission trader informed the members of Long's exploring party, that he had seen a greyish white *Rison*, and a yeathing-eat, that was distinguished by several white spots on the side, a star or blaze in the forehead, and white fore feet. Mr. J. Doughty, an interpreter to the expedition, saw an Indian but a very well prepared *Rison* head, with a star on the trunk. This was highly prized by the proprietor, who owned











is his *great medicine*, for, said he, 'the herds come every season to the vicinity to seek their white companion.'

"In appearance, the Bison cow bears the same relation to the bull that is borne by the domestic cow to her mate. Her size is much smaller, and she has much less hair on the fore part of her body. The horns of the cow are much less than those of the bull, nor are they so much encased by the hair. The cow is by no means destitute of beard; but though she possesses this conspicuous appendage, it is quite short when compared with that of her companion.

"From July to the latter part of December, the Bison cow continues fat. Their breeding season begins towards the latter part of July, and continues until the beginning of September, and after this month, the cows separate from the bulls in distinct herds, and bring forth their calves in April. The calves rarely separate from the mother before they are a year old, and cows are frequently seen, accompanied by calves of three seasons.

"The flesh of the Bison is somewhat coarser in its fibre than that of the domestic Ox, yet travellers are unanimous in considering it equally savory as an article of food; we must, however, receive the opinions of travellers on this subject with some allowance for their peculiar situations, being frequently at a distance from all other food, and having their relish improved by the best of all recommendations in favor of the present viand—hunger. It is with reason, however, that the flesh is stated to be more agreeably supplied with the grass upon which these animals feed is short, firm, and nutritious, being very different from the luxuriant and less saline grass produced on a more fertile soil. The fat of the Bison is said to be far sweeter and richer, and generally preferable to that of the common Ox. The observations made in relation to the Bison's flesh, when compared to the flesh of a domestic Ox, may be extended to almost all wild meat, which has a peculiar flavor and richness, which renders it decidedly more agreeable than that of tame animals, although the texture of the flesh may be much coarser, and the fibre by no means so delicate.



"In all the parts of the River that are open, the hump is the most valued for its peculiar richness and delicacy. It is always fresh, and very much more tender in flavor.

"The tomatoes and melons here are most highly esteemed by the hunters.

"During the months of August and September the bottom of the River bed is pebbled and shagreened, the clay laminae, much more easily broken as they are not so compact as the rocks, and soon it is a low tide hunters to come up to them without much difficulty. Lawrence and Clark, seeing that our approach to the head of the butte would cause the retreat of the animals, and as they came near, the animals would merely look at us for a moment, as at something new, and then quietly resume their grazing.

"The general appearance of the River is by no means attractive or picturesque. Its large and shapeless formations altogether devoid of grace and beauty. The soil is awkward and unattractive. It is a barren, almost unproductive country, with very considerable pebbles or pebbles in the surface of an winter to plunge expeditiously through the snow.

"The sense of solitude is very great, and is not only increased by the barrenness of the country, but the solitude of the River is increasing to a point where the Indian, living in the neighborhood of water, often finds it very quiet. In spite of this, however, is very pretty, especially for the Mt. Leno, which attracts us to the river, and is a very fine view, which the whole man wages against a doubled animal within his reach.

"The herds of Bison wander over the country in search of food, usually led by a bull most remarkable for strength and fierceness. When feeding, they are often scattered over a great extent of country, but when they go to rest, they form a dense, almost impenetrable column, which, once in motion, is scarcely to be impeded. Their line of march is seldom interrupted, even by a wide, low river, across which they swim without fear or hesitation, rarely in the order they travel in the past. When



flying before their pursuers, it would be in vain for the foremost to halt, or attempt to obstruct the progress of the main body, as the flying of the rear still is long onward, the leader must advance, although destruction wait the movement. The Indians take advantage of this circumstance to destroy great quantities of this favorite game, and certainly no mode could be resorted to more effectively destructive, nor could a more terrible devastation be produced in a tract of country having a numerous herd of these large animals to leap together from the brink of a dreadful precipice upon a rocky and broken surface, a hundred feet below.

When the Indians determine to destroy Bison in this way, one of their swiftest, fiercest and most active young men is selected, who is disguised in a Bison skin, having the head, ears and horns adjusted on his own head, so as to make the deception very complete, and thus accoutred, he stations himself between the Bison herd and some of the precipices that often extend for several miles along the rivers. The Indians surround the herd as nearly as possible, when, at a given signal, they shout themselves, and rush forward with loud yells. The animals being alarmed, and seeing no way open but in the direction of the disguised Indian, run towards him, and he taking to flight, dashes on to the precipice, where he suddenly secures himself in some previously selected crevice. The foremost of the herd arrives at the brink—there is no possibility of retreat and chance of escape. The foremost may for an instant shrink with terror, but the crowd behind, who are retarded by the approaching hunters, now formed with momentum and impetuosity, and the aggregated force of them successively near the edge, where certain death awaits them.

It is extremely fortunate that this sanguinary and wasteful method of killing Bison is not very frequently resorted to by the Indians, or we should expect these animals in a few years to become almost entirely extinct. Lewis and Clark bestowed the name of *Shesha-ne-Bison* on one of the tributaries of the Mississippi, in consequence of the precipices along its banks having been used by the Indians for this mode of killing the Bison.







male which live together. They have been seen in herds of three, four, and five thousand, obscuring the plains as far as the eye could view.

\* Some travellers are of opinion that they have seen as many as eight or ten thousand in a herd, but that is merely a conjecture. At night it is impossible for a person to sleep near them who is unaccustomed to their noise, which from the incessant lowing and roaring of the bulls, is said to very much to resemble distant thunder. Although frequent battles take place between the bulls, as among domestic cattle, the herds of the Bison are peaceful and inoffensive, seldom or never offering to attack man or other animals, unless outraged in the first instance. They sometimes, when wounded, turn on the aggressor, but it is only in the killing season when any danger is to be apprehended from the ferocity and strength of the Bison bull. At all other times, whether wounded or not, their efforts are exclusively directed towards effecting their escape from their pursuers, and at this time it does not appear that their rage is provoked particularly by an attack on themselves, but their usual hostility is indiscriminately directed against all suspicious objects.

• We shall conclude this account of the Bison, by introducing the remarks of John E. Cuthbert, Esq.,<sup>2</sup> relative to the extent of country over which this animal formerly roamed, and which it at present inhabits.

• The Buffalo was formerly found throughout the whole territory of the United States, with the exception of that part which lies east of the Hudson's River and Lake Champlain, and of narrow strips of coast on the Atlantic, and the Gulf of Mexico. These were swamps, and had probably long thick woods.

• That it did not exist on the Atlantic coast, is rendered probable from the circumstances that all the early writers whom Mr. Cuthbert has consulted on this subject, and they are numerous, do not mention them as existing there, but further back. Thomas Morton, one of the first settlers of New England, says,

\* Long's Expedition to the sources of the St. Peter's River, ii. p. 28.







Lower Louisiana. We know, however, of one author, Bernard Hemmels, who wrote in 1774, and who speaks of the Buffaloes as a kind of nature bestowed upon Florida. There can be no doubt that the animal approached the Coast of Mexico, near the Bay of St. Bernard, for Alvar Nunez, about two years back, came down not far from the coast, and, besides, one hundred and fifty years afterwards, saw them at the Bay of St. Bernard. It is reported that this bay is the lowest point of latitude at which this animal has been found, east of the Rocky Mountains. There can be no doubt of their existence west of these mountains, though Father Venegas does not include them among the animals of California, and although they were not seen west of the mountains by Lewis and Clark, nor mentioned by Harmon and Massena, as existing in New California, a country of immense extent, which is included between the Pacific Ocean, the Rocky Mountains, the territory of the United States, and the Russian possessions on the northwest coast of America, yet their existence at present on the Columbia appears to be well ascertained; and we are told that there is a tradition among the natives, that shortly before the visit of our enterprising explorers, destructive fires had raged over the prairies, and driven the Buffaloes east of the mountains. Mr. Dougherty, the very able and intelligent sub-agent, who accompanied the expedition to the Rocky Mountains, and who communicated so much valuable matter to Mr. Say, asserted that he had seen a few of them in the mountains, but not west of them. It is highly probable that the Buffaloes ranged on the western side of the Rocky Mountains, to as low a latitude as on the eastern side. Dr. Hart says, on the authority of Hemmels, that they grazed as far south as the banks of the river Yaguma. In the same chapter this author states, that Martin Perez had, in 1591, estimated the Province of Cordoba, in which this river runs, to be three hundred leagues from the City of Mexico.

"Although we may not be able to determine with precision, the southern limits of the range of the Buffalo west of the



mountains, the fact of their existence there in great abundance is implied by the testimony of De Kay, in the authority of *Game and Fish*, p. 17, and of *Pisces*, p. 78. It is doubtful whether we are authorized to determine. In Hensley's collection we find in the account of Sir Humphrey's Arctic voyage, which commenced in 1854, that the people met with in the district of Newfoundland "Buffaloes, or at least, something of the kind and form, very large as the mammalian class." It may, however, be questioned, whether these were not Musk Oxen, instead of the common Buffalo, or Bison, of our prairie. We find no authority of any weight which warrants admitting that the Buffalo extended north of Lakes St. Lawrence, Erie, &c. and west of Lake Superior. From what we know of the country between Nelson's River, Hudson's Bay, and the lower St. Lawrence, New South Wales, and Upper Canada, we are inclined to believe the Buffalo never penetrated there, reaching perhaps even as far north of the Lake. But west of Lake Winnipeg, we know that they are found in great numbers, extending as far north, Canada. Captain Francis's party found them on the River, about the 60th degree. Probably they were introduced over the prairie, which are being so gradually converted into ranches, and at the present time extend to the base of the Rocky Mountains, and thence in a westerly direction, to the farther extremity of Lake Winnipeg, which is very little north of the 50th degree. On the St. Lawrence, Buffalo are very abundant. It may be proper to mention here, that the name white Buffalo or snow Buffalo is made of frequent mention on the authority of the Indians, who tell him that they find in the mountains of the St. Lawrence the Lakes and the mountains, that the Indians designated by that name the Mountain Sheep. It is probable that west of the Rocky Mountains the Buffalo does not extend far north of the Canada. At present it is scarcely ascertained in Mississippi, and south of the St. Lawrence. Common Canadian Buffalo, in 1819, Buffalo on the east side of the Mississippi,



above the Falls of St. Anthony. Every year this animal's wanderings are restricted. In 1877, the limit of its wanderings down the St. Peter, was Great Swan Lake, near Camp Crescent."—*Goldman's American Natural History*.

## THE ELK, OR WAPITI.

*CERVUS CANADENSIS*; BEER.

*Cerv du Canada*; *Pennant, Mon. des les Amér.* ii. 45. *Cervus Major Americanus*, *Cutler, Catal. App.* ii. 48. *Cervus Strongylodon*, *Schreb Strongylodon*. *Am. Americanus*, *Charadon Terebinth*; *Afferson's Virgatus*, 96. *The Elk*, *Linn. us. Nov. Vopon*, *Carter, Penna.* 117. *The American Elk*, *Burch, Spandevseds*, 111. *Cervus Wapiti*, *Burton, Med. and Physiol. Journ.* iii. 36. *Wapiti*; *Wardlaw, Descr. des Kiste-Champs*, 206; *Sing, Red Deer*, *ibid.* 307. *Wap-ti*; *Mitchell, Linn.* 4, *Frid. Casar, Muséum Lathr.* li. 213. *Cerv Wapiti*, *Down. Mamm. septent.*, *Cerv Canadian* *ibid.*, p. 603. *Wapitiok*, *Wapitok*, *Wapitokokok*. *Hunter, Juncap.* 3c. 266. *Common-pointed Stag*, *Red Deer*, *Great Moose*, *La Roche*, *Wapiti*, *American Elk*, *Roundhorn Elk*, *Elk*, &c.

"The stately and beautiful animal we are now to describe, has been, and very recently, confounded with other species of Deer, to which it bears but a slight resemblance, and from which it is distinguished by the most striking characters. The Elk, however, a variety is commonly known, and which we prefer to others, to the common stag given to the Moose in Europe. Hence this species was for a long time considered as a misnomer, and the Moose is not identically the same. A general resemblance to the European Stag, caused the application of the same name to our Elk, and this circumstance led various writers into the error of considering our animal to be a variety of the *Cervus Elaphus*, or common Stag of Europe.







row point, the snout large and capably movable, the eyes are full and dark, the horns rise totally from the front, with numerous deep pointed branches, which, in the fall, are and, and the head is concealed upon a coat of coarse winter rags, and grained. The beauty of the male lies in a set of long, curled by the long forward curving hair, which forms a sort of tuft or beard extending from the head around the mouth, which grows short and is far little different from those seasons covering. The body of the Elk, though large, is finely proportioned, the limbs are small and apparently delicate, but are strong, sinewy, and agile. The hair is of a bluish grey color in autumn, during winter it assumes a dark gray, and at the approach of spring, it assumes a reddish or bright brown color, which is permanent throughout summer.

"The complexion of a pale yellowish-white or clay color, and this color extends about the tail for six or seven inches, and is almost universally found in both sexes. There is a necessary pre-requisite difference of color between the male and female.

"The female, however, does not participate in the 'breaking horns' of the male, which are found to attain, in numerous instances, a surprising magnitude. It is not uncommon, to see them of four and five feet in height, and it is said that they are sometimes still higher. Specimens of the largest size may be seen in the cabinets of the Philadelphia Museum, and of the Lyceum of Natural History, New York. These horns are said to consist of three principal divisions: 1st, The brow ridges, sometimes called 'riders' by the hunters; 2d, The two ramble points, called 'splitting horns,' and 3d, The shaft, or proper horns. The middle last mentioned are always placed on the front, outside or not round twice, never on the inner side of the horns, a circumstance which has been indicated as strikingly different from the arrangement of the branches of the horns of the reindeer, or Virginian Deer, to be described.

"The Elk sheds its horns about the end of February, or beginning of March, and such is the rapidity with which the new horns shoot forth, that in less than a month they are a foot in







the ear and its connection with the nostrils. The Elk has at one period ranged over the greater part, if not the whole, of this continent. Jackson has stated that he could never learn that the Round-horn Elk has been seen farther west than the Hudson River. But Hemme has described the Wewashek in such a manner as to leave no doubt of its existence as far north as the vicinity of Cumberland House, in lat. 54 deg. 5 min. Elk are still certainly found in the north, and thick, settled parts of Pennsylvania, but the number is small. It is only in the western woods that they are seen in considerable herds. They are found at the green forests, where a luxuriant vegetation affords them an abundant supply of food and shelter, or of the open plains where the solitude is seldom interrupted, and the continuous nature spreads an immense field of verdure for their support.

• Proud, solitary and retiring, having acute senses, he perceives early the coming of the approach of any human intruder.

• The moment the air is tainted by the odor of his enemy, his head is erect, and with spirit his ears rapidly thrown in every direction to catch the sounds, and his large dark glistering eye expresses the most eager attention. Soon as the approaching hunter is fairly discovered, the Elk bounds alone for a few paces, as if trying the strength for flight, stops, turns half round, and starts his pursuer with a steady gaze, then throwing back his left horn upon his neck, and propelling his taper nose forward, he springs from the ground, and advances with a velocity and swiftness that is equal to the report of his discharge at sight.

• The season when several young males with its wanted influence meet the staid animals, the Elk, like various other ruminant animals, are rendered with three distinct characters. His character is such, put to flight one can be supposed to accompany, though he may have been wounded. The wounded hunter then employs much great effort, and the hunter must not be so much hindered by coming within the reach of the animal. It is common to stalk August and September, when the horns are in perfect order, and the males appear filled with







any such apparatus or aid. Until better proof be given than has yet been offered, we stick fast without crink the stones among the "conjectures" which have been too often resorted to when there was a scarcity or difficulty of convincing facts."

"We have already alluded to the warlike disposition of the Elk during a particular season, but it may not be amiss to add, that at all times this animal appears to be more ready to attack with his horns than any other species of Deer we have examined. When at bay, and especially if slightly wounded, he fights with great sagacity, as it is called to be attempted. The following instance from Long's Expedition to the Rocky Mountains, will in some degree illustrate this statement.

"A herd of twenty or thirty Elk were seen at no great distance from the party, standing in the water, or lying upon the sand beach. One of the most bucks was singled out by a hunter, who fired upon him; whereupon, the whole herd plunged into the thicket and disappeared. Relying upon the skill of the hunter, and confident that his shot was fatal, several of the party dismounted and pursued the Elk into the woods, where the wounded buck was soon overtaken. Finding his pursuers close upon him, the Elk turned furiously upon the foremost, who only saved himself by springing into a thicket which was inaccessible to the Elk, whose enormous antlers becoming so entangled in the vines as to be covered to their tips, he was held fast and humiliated and was despatched by repeated bullets and stabs."

—*Godman's American Natural History.*







Mathe, where it is becoming rare. In Nova Scotia, the Isle of Brant in the country adjacent to the Bay of Fundy, and throughout the Hudson's Bay possessions, the Moose is found in considerable numbers.

The densest forests, and closely-shaded swamps of these regions are the favorite resorts of this animal, as there the most abundant supply of food is to be obtained with the least inconvenience. The larch, alder, and tamarack trees, which in an open pasture appear so insignificant, are here of essential importance, in enabling the Moose to crop the buds and young twigs of the birch, aspen, or poplar, or should be perfect the spruce plants, which grow most abundantly where the soil is unfit to support other animals, that some length of limbs enables it to reach with security and ease. We cannot avoid believing that the peculiar lateral and shagging position of the nostrils is immediately connected with the manner in which the Moose forages. Their construction is very muscular, and seems very well adapted for seizing and tearing off the twigs and taking out the buds, and conveying them to the mouth; it may also be designed to prevent the sense of smell from being at any time suspended by the prehension of food. The probability of this last suggestion is strengthened by the fact, that the Moose is endowed with an exquisite sense of smell, and can discover the approach of hunters at very great distances. When obliged to feed on level ground, the animal must either kneel, or separate the legs very widely. In reaching on the sides of acclivities, the Moose does so with less inconvenience by grazing from below upwards: the steeper the ground may be, so much the easier it is for it to reach its pasture. Yet, whenever food is to be procured from trees and shrubs, it is performed so that when only to be obtained by grazing. The Moose, like his kindred species, the caribou, and reindeer, except in the winter when they seek each other: then the males display a territorial and proprietary, which forms a strong contrast to their ordinary actions. Were they only examined during such seasons, the character of the species would be entirely







however, does not run far, before the animal on the snow, through which he breaks at every step, casts his head so sensibly that the poor animal stands at bay, and endeavours to defend himself against the dogs, by striking at them with his fore feet. The arrival of the hunter within a convenient distance soon terminates the combat, and all from his rifle easily finishes bringing the Moose down.

"Judging by the rapid diminution of this species within a comparatively few years, it is to be feared that it will, at no great distance of time, be exterminated. The Moose is easily tamed, although of a wild and timid disposition; sometimes when taken very young, they are domesticated to a remarkable degree. We are informed by our friend, Mr. Verhulst, of New Brunswick that he knew of one which he tamed, who now, being old, by an hunter, and presented to a gentleman in New-Scotland. The proprietor allowed it to walk a row for three months, and afterwards fed it with different vegetables, until it was a year old. This Moose displayed singular animosity against one of the young ladies of the family, and would charge with fierceness into the house. When the door was closed in time to exclude him, he would immediately turn round and kick violently against it.

"The horns of the Moose sprout almost immediately from their base into a broad palmation, so old and as they increase to a great size, and have been known to weigh fifty-six pounds, each horn being thirty-two inches long. The horns are generally cast out in a month or so from birth, the Indians employ them for various purposes, cutting them into spoons, canoes, &c.

"When chased, the Moose throws his horns towards his pursuer, elevates his nose, and dashes swiftly into the thickest of the forest, seeking with the horns point the means of his destruction, by becoming entangled among vines, or caught between small trees. When the Moose can see a plain, he moves with great celerity, although, being not so strong as a long shuffling trot, this, however, is rendered very efficient by the great length of his limbs. While running in this manner, the



It is seen, in the terms which are very generally adopted, whether, from the general, and close to it, and ordinary, as well as, from the latter, a general, must not be formed, as in the case of the *Alveolar*, an instance is also remarked in the *Rein-fur*.

They are not like the *Phalaropus lobatus* of the Atlantic, which will be easily captured by pole and net, but when flushed they resort to jumping to some advantage. They are tall, short-billed and tender-footed.

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The flesh of the Moose, though, exactly compared to the other, therefore venison, is esteemed excellent food, and the Indians, hunters, and travellers, all declare they cannot find anything so well suited to this season, while hunting any other. The shape and strictly extremity of the nose is appreciated as peculiar, and the tongue of the animal is also, they praise, instructive, for it is not commonly sweet, and delicate as the tongue of a human. Deer. As the Moose feeds upon the birch, some of the small branches of the willow, bark, poplar, maple, &c. &c. &c. &c. its flesh must be peculiarly delicious. Therefore



intestines is hard like meat, but all the external fat is soft, the tint of a secret of secretion, and when put into a bladder is as firm as mutton. In this they differ from all other species of Deer, so much, that external fat is necessary to the kidneys.\*

\* The female Moose never leaves company, they bring forth their young, from one to three in number, in the latter end of August or beginning of May. The male Moose often exceeds the female Horse in size and bulk, the female is much less than the male, and uniformly colored. The tail of the male is long and wet, like that of the common Deer, it is naked at the tip, but within it is of a smooth, shagreen, and at the base pure white. The anal of the female is of a sandy-brown color, and in some places, especially under the throat, belly and flank, is nearly white at tip, and altogether so at base.

\* The skin of the Moose is of great value to the Indians, as it is used for tent covers, clothing, &c.

\* The Moose, like most Deer inhabiting the northern regions, is exceedingly annoyed by insects, which not only feast upon its flesh, but deposit their eggs in different parts of its body, along the spine, within the cavities of the nose, mouth, &c. These eggs, when hatched, form large larvae, or maggots, that feed on the parts on which they are placed, until ready to assume their perfect or winged condition, when they perforate the skin and take flight. So great a number of such perforations are made at certain seasons that the skins of the Moose are rendered worthless to the trader, unless it be for the purpose of cutting them into thongs for nets, and other uses."—*Goodman's American Natural History.*

\* Burns. \* Red.



## THE REIN-DEER—VULGO, CARIBBO

CERVUS TARANDUS: L.

*Cervus Tarandus*, L., *Syst.*, 10. *History of the old French colonies*. *Cervus Tarandus*, *Harris's Faint Discoveries*, p. 242. *Michaux's Am. Nat. Hist.*, vol. ii., p. 280. *Reinhardt's F. B. A.*, vol. i., p. 208. *Commons House Report*, 1840, p. 58.

*Characteristics*.—Very much like brown-deer, brown to grayish-white. About the size of the common Deer.

*Description*.—Body robust, short on the legs, somewhat, with oblique nostrils, ears large, horns many-jointed, very variable in form. The generally conical or warty ones which are peduncle and digitate, the more slender and backward then curving forward, with simple or pinnated antlers, of the former nature in several peduncle specimens, which, often, terminate in the point, and consist of a single unjointed, sometimes of a single pinnated, but one joint, sometimes, with a strong fringe of fine points. The antlers are simple, but a compound of two portions, one weaker than the other, and not symmetrical.

*Color*.—Varying with the season. A young animal always with a tinged or dusky tawny. Young of the summer are spotted with brown, becoming tawny and whiter in winter, brown throughout belly, and under white at all seasons.

It is with much hesitation that I include this animal in the Fauna of our State, but the representations of hunters lead me to suspect that when the yet unexplored parts of the State have been more thoroughly examined, it exists, many a field and Pennant, in his time, is cited that the Rein-deer was not found farther South than the most northern part of Canada. *Chesley*, however, is one who did not quail. The specimen in the cabinet of the Medical College at Albany, came from Nova Scotia, and *Harris* asserts that it does not pass the State of Maine into the United States, implying its existence there.



Professor Minnons observes, "It is only a few years since this animal appeared in the northern parts of Vermont and New Hampshire, from which it is not unreasonable to infer, that in earlier times it may have passed still farther south." Its gregarious habits, and unsuspicious character, would seem to ensure its speedy destruction, when placed within the range of man."—*DeKay's Natural History of New York*.

## THE AMERICAN DEER.

*Cervus virginianus*.

*Deer Virginianus*: *Ray, Lyr. Spand.*, p. 56. *Cervus Virginianus*, *Harlan, Penna. Deer*, p. 249. *Ordway, Am. Nat. Hist.* vol. ii., p. 396. *Mazanus Id., Hamilton Smith, Griffith's Cat.* vol. ii., p. 157, and vol. i., p. 115. *Cervus Mazanus*; *Miscellaneous Characters*; *Hamilton Smith, &c.*, p. 315. *Fallow Deer*: *Knowles, Mamm. Reports*, 1840, p. 81.

"*Characteristics*—Reddish or bluish gray, according to the season. Young, spotted with white; horns moderate, curving forward, with the concave part in front, with five or six points, occasionally palmated.

"*Description*—Head long and slender; muzzle pointed; eyes large and lustrous, the lachrymal pits consisting of a slight fold of the skin; ear moderate, depressed, legs slender; a glandular pouch concealed by a thick tuft of rigid hairs back of the hind legs, which runs and connects with the sexual appetite. The form of the antler may vary so much in shape, that scarcely two are alike, appearing to depend upon age, season, and abundance or scarcity of food. In the first season they are simple, cylindrical, and pointed, and in this state they are known as *Spoke Bucks*; in the following season they have a short straight neck, and the number increases until the fourth season, when the following is the most usual condition of the







palmer. In an uncolonized area, as on Long Island, where the Warblers are not reported and the Blue-winged Green is protected on the laws during the last two years, at least, more than a hundred are seen, but not in proportion, yet this bird is not so common as it has been in the past.<sup>4</sup>

The *Dendroica cerulea* and *auricularia* are common in a locality which in the latter part of the breeding season, May and June, is the southernmost nesting ground of the species. In this region, however, the males do not sing in the field, and on occasion they, even the ones, considerably excited. When alarmed, they stamp quickly and often in the ground, and sometimes, like the *well-wanted*, which seems to have lost its nest instinct. When severely irritated, they give a rattling sound, but not of alarm. When being irritated, it throws off its habitual timidity, and even shows hostility toward, every bird within its reach. It is, therefore, not directed toward, and it dashes boldly upon its foe. Its home is not usually in the winter, but the present appears to depend much on the local conditions, as is evident from the fact. While growing, the houses are covered with a velvet, brown lining, which picks off as soon as the house is old and dry in the air. It has often been seen a number of surprise, that while so many houses are usually built so low, are ever found. This is due, explained by the fact that as soon as built, they are taken up by the sun, but in a certain way. I have repeatedly found them well grown up in the various kinds of dead trees, in the forests, in

[illegible]

■ *Leptocryptus* species from the South American subgenus collected between 1950 and 1960 are shown in Figure 1. *Leptocryptus* species from the subgenus *Leptocryptus* (subgenus *Leptocryptus*) have been found in the southern part of the South American continent. The species *Leptocryptus* (subgenus *Leptocryptus*) have been found in the southern part of the South American continent. The species *Leptocryptus* (subgenus *Leptocryptus*) have been found in the southern part of the South American continent. The species *Leptocryptus* (subgenus *Leptocryptus*) have been found in the southern part of the South American continent.







"According to Say's description, the horns are slightly grooved and tubercled, but the horns of this are a small branch near the base, resembling in situation and direction the hair branch on the horns of the common Deer. The curvature of the antler is curved like that of the common Deer, but not so strongly developed, and at about two-thirds of the way is knotted and flattened, thus forming equally each of these processes an indentation near the extremity, the posterior being somewhat the deeper. The eyes are very large, being half the length of the snout below, and extending to its principal bifurcation.

"The eyes are larger than that of the common Deer, and the external nostrils much larger. The ears are coarse, and dense, and composed of a middle that of the Elk—*Cervus*—and is of a most remarkable crimson color above. The color of the hair on the front of the nose is of a dull ash color, that on the sides removed with black tipped hairs, which forms a distinct line on the neck, near the head. The hoofs are shorter and wider than those of the common Deer, and more like those of the Elk."—*Audubon's American Natural History*

"The following measurements are given by Say in the work above quoted: Length from the snout to the ears to the end of the hind process, six inches; 42 the hind process, rounded at tip. From the hind process to the principal bifurcation, five to six. Yellow in the middle and to the base, except only toward the tip, which is black. 43 the part of the hind process, rounded at tip, same. The part of the hind process, which is not except the upper portion, red except at the base of the antler, where it is sometimes brown. 44 the hind process, then rounded at tip. 45 the trunk of the hind, four. 46 the hair at the tip of the tail, from three to four."



## THE AMERICAN ANTELOPE, OR THE PRONGHORN.

## ANTILOPE AMERICANA.

*Antelope*, Lewis and Clarke, i. 71, 708, 709, ii. 149. *Antelope Americanus*, *Art. Naturæ Descriptive, Periodica*, 1801. *Antelope Americanus*, *Bull. Journal de Philosophie*, 1805. *See*, *Jung's Expedition to the Rocky Mountains*, i. 30, 48. *Antelope* *Fau. Tex. South*, *Trans. of American Soc.* vol. 1. 2. *Prong-horned Antelope*; *Bab. App.* p. 667.

"Our adventurous countrymen, who led the first expedition across the Rocky Mountains, were the first to call attention to this beautiful animal and the first to endow it by its true name."

"Notwithstanding the disadvantages of the circumstances, the circumstances of its discovery, effect on progress, &c. have kept Americans long and desirous to visit your country, to occupy at their amusement, and even their employment, by which they become anxious to procure ready means of *reproducing* their own name, if they have the desire to see information on the subject. As that function related concerning this animal, which is worth repeating, or recording, was published in Lewis and Clarke's narrative, repeated, and since been confirmed by the observation of Dr. Richardson, appended to Franklin's *Journey to the Polar Sea*. I refer to the name which they deposited in *doct. mss. at D. C.* I happily checked the translation of synonym, and so, and the few facts contained in the narrations of the above mentioned accurate observers of nature.

"The Prong-horn Antelope is an animal of wonderful fortitude, and so shy and timorous as seldom to expose, except the ridges which command a view of the surrounding country. The suddenness of their flight and the exquisite design of their small horns is a exceedingly difficult to approach them. When once the hunter is perceived, the severity with which he



ground is passed over appears to the spectator to resemble the flight of a bird rather than the motion of a quadruped.

"In one instance, Captain Lewis, after various fruitless attempts by winding around the ridges succeeded in approaching a party of seven that stood upon an eminence towards which the wind was unfortunately blowing. The only mare of the party frequently emitted the *saucant* of the bull, as if to announce any danger to the group of females which stood upon the top. Before then saw Captain Lewis, they became alarmed by the scent, and fled while he was at the distance of two hundred yards. He immediately ran to the spot where they had stood, a ravine concealed them from him, but at the next moment they appeared on the second ridge at the distance of three miles. He could not but doubt whether these were the same he had alarmed, but their regular and continued speed, convinced him they were so, and he justly infers that they must have run with a rapidity equal to that of the most celebrated race-horse.

"Yet, notwithstanding the keenness of their senses, and surprising velocity of their course, the Prong-horned Antelope is often betrayed to his destruction by curiosity. When the hunter first comes in sight, his whole speed is exerted, but if his pursuer lies down and lifts up his hat, arm or foot, the Antelope stops back to gaze at the object, and sometimes goes and returns two or three times, until it comes within reach of the rifle. This susceptibility occasionally enables the Wolves to make them a prey; for sometimes one of them will leave his companions, to go and look at the Wolves, which should the Antelope be tricked at first, crouch down, repeat the *manawau*, sometimes heaving up his body, until they succeed in decaying it within their power when it is pulled down and devoured. But the Wolves more frequently succeed in taking the Antelope when they are crossing the rivers, as they are not good swimmers. 'The chief game of the Shoshonees,' says Lewis and Clarke, 'is the Antelope, which, when pursued, retreats to the open plains where the horses have full room for







and Clarke, in the month of October, near Carp Island, in the Missouri, when large flocks of them were driven into the water by the Indians. The men were ranged along the shore, some to prevent a escape of the Antelope, and fired upon them; and sometimes the boys went into the river, and killed them with sticks. Fifty-eight of the Antelope were secured by the Indians during the time they were observed by our travelers. They were then migrating from the prairie east of the Missouri, where they spend the summer, toward the mountains, where they find on-leaves and scrub-oak, during the winter, in the spring they resume their migrations.

"The Mandan Indians capture the Pung-lant Antelope by means of a pound, similar to that described in the account of the Beaver. The following description is given by Dr. Richardson, from a recent specimen — The male is furnished with short, dark, somewhat tapering horns, arched inwards, turning towards each other, with their points directed backwards, each horn having a single short bristle projecting from the middle. The winter coat consists of coarse, round, hollow hairs, like those of the Moose. The neck, back, and legs, are yellowish-brown, the sides are reddish-white, the belly and chest are white, with three white bands across the throat. The hairs on the occiput, and back of the neck, are long, and tipped with black, forming a short crest or mane. There is a black spot between each cheek, which exudes a strong goat-like odor. The tail is short, on the rump there is a large spot of pure white. The dimensions of the animal were as follows: From the nose to the base of the tail, ten feet; height of the nose-shoulder, three feet; that of the hind-quarter, the same. Girth behind the fore-legs, two feet ten inches. The female is smaller than the male, having straight horns, with rather a protuberance than a prong. She is also deficient in the black about the neck."—*Godman's American Natural History.*

\* An Antelope was killed in Southern Oregon, near Rogue River, which was one of the four the hunters had seen; it was







Mountains, but are very rarely seen at any distance from the mountains, where they appear to be better suited to live than elsewhere. They frequent the peaks and ridges during summer, and occupy the valleys in winter. They are easily obtained by the hunters, but their flesh is not much valued, as it is musty and unpleasant; neither do the traders consider their fleece of much worth. The skin is very thick and spongy, and is principally used for making moccasins.

The Rocky Mountain Goat is nearly the size of a common Sheep, and has a shaggy appearance, in consequence of the protrusion of the long hair beyond the wool, which is white and soft. Their horns are five inches long, and one in diameter, conical, slightly curved backwards, and projecting but little beyond the wool of the head. The horns and hoofs are black.

The first indication of this animal was given by Lewis and Clarke, and it is much to be regretted that so little is still known of the manners and habits of this species. The only specimen preserved entire, that we know of, is that figured by Sauth in the *Linnæan Transactions*, from which the figure in our plate is taken. The fineness of the wool of this animal may possibly hereafter induce persons, who have it in their power, to make some exertions to introduce this species among our domestic animals. It is said that the fleece of this Goat is as fine as that of the celebrated Shetland Goat of Cashmere.

#### " SHEEP; OVIS.

*Ovis montanus* (Cashmere).—The outline of the face is arched, or convex, and the mouth has no muzzle; the ears are pointed, and of moderate length; the horns, which are transversely wrinkled, large and triangular, are twisted laterally into spirals, and have numerous rings, or scellæ, as a scellæ structure. The under eye and eye, and are covered with uniform short hair; the lower jaw, curved downwards, is peridulous. Neither sub-ossæ nor glands, beard, nor median lip exist in this genus."—*Godman's American Natural History.*







*one-shaggy*—and comes of various kinds. Its fondness for some things is evident when one enters an apple orchard, immediately observing the same sort of knots. It will also devour eggs, insects, small quadrupeds and birds. But its chief business is done at its favorite vegetable food, which gives rise to a noise of a *D.*, without tearing it. The *Beaver* is an imitative animal; and hence, when it meets a mouse or a squirrel on its trail, it bays, but is apparently satisfied with the comparison, and does not try to make it complete. It is a great traveller, and when pursued by track men, it has been known to perform long portages. It never makes immediately for its retreat, but appears to run in a circuiting manner. A *Beaver* was killed near Seattle some years since, and after a chase of eighteen days, was finally killed. Although old, nevertheless it was, yet he appeared to be fully aware that he was in a part of pursuit, and the men and horses he and two of his two best friends were with him. They were some times on the head of the *Beaver*, and in the mountainous regions of Rockland and Grange. Occasionally they invade the enclosure of the farmer, in search of potatoes and Indian corn. Their depredations are, however, speedily checked, for they are timid, and will never attack a man, unless previously wounded, or in defence of their young. Some of the hunters imagine that there are two varieties of the common Black *Beaver*, viz., the short-legged and the long-legged; but other inform me that the difference is owing entirely to the fact that some are taller and more robust, which produces an apparent difference in the length of their legs.

The *Yellow Beaver* of *Chautauque* and the *Chautauque* *Beaver* of the northern region are sometimes these species. In this State, they come with the first fall of snow to caverns, or to the hollows of some decayed tree, or beneath a prostrate tree, during

harsh winter days, and remain. I observed water holes, with a little water, and a small hole in the ice. These are a little ways ago. In the hole a white pine, a birch, and a spruce, a poplar, a white birch, with the tree, wild raspberry, etc., which attracts to the distinct great numbers of *Beaver* and *muskrat* *Beaver*.



the winter, and pass three or four months in a state of torpor. In more southern latitudes the hibernation is of shorter duration, and ceases to occur when the temperature of the winter enables them to procure food. They are fat when they enter their winter quarters, and much emaciated when they leave them in the spring. Indeed, this condition of figures is so necessary, that when the supply of food is cut off, instead of retiring to winter quarters, they migrate southward, to a warmer region. Hence great numbers are occasionally known to enter our territory from the North, composed entirely of lean males, or females not with young.

"The flesh of the bear is savory, but rather liverish, and tastes not unlike pork. It was once so common an article of food in New York as to have even the name of *Bearstew* attached to one of the principal markets in the city. The female goes with young seven months, bringing forth two young in February or March. The old and fat ones weigh four pounds, and the skin from four to five or six, according to the size."

"A very large individual was shot on the Adirondack Mountains, Lewis County, during the winter of 1856. It was found six feet and a half from the nose to the tip of the ear, around the fore shoulder measured three feet two inches from the ground."—*A. Kirby's Natural History of New York.*

## THE GRIZZLY BEAR.

URSUS HORRIBILIS.

*Ursus Horribilis*, Say, *Linnæus's Natural History of the Rocks, Mountains, and a Large Tract of the West*, 1821. *Ursus Ferox*, the Grizzly, White, Louisiana and Plains, *Journal of Lewis and Clark.*

"This bear, justly considered as the most dreadful and dangerous of North American quadrupeds, is the strongest and sanguinary monarch of the wild over whom he reigns. Un-



gentle in size and terrible in aspect, he unites to a ferociously blood-thirsty disposition, a surpassing strength of limb, which gives him undisputed supremacy over every other quadruped tenant of the wilderness, and causes man himself to tremble at his approach, though possessed of weapons unknown to any but the human race. To the Indians the very name of Grizzly Bear is dreadful, and the killing of one is esteemed equal to a great victory; the white hunters are almost always willing to avoid an encounter with so powerful an adversary, and seldom or never wantonly provoke his anger.

— This voracious animal voraciously pursues and attacks man or animals, when excited by hunger or passion, and slaughtering indiscriminately every creature whose speed or artifice is not sufficient to place them beyond his reach.

— However singular it may appear that an animal endowed with such a fondness for destruction, and blood, can exist altogether on vegetable food, it is a fact that the Grizzly Bear, no less than all other species belonging to the same genus, is capable of subsisting exclusively on roots and fruits; this may be inferred from the peculiarity of their dentition. It is by no means surprising that hunters and travellers should suppose the Grizzly Bear to be almost wholly carnivorous, seeing that he displays such an unappeasable ferocity of disposition, and so uniform an eagerness to destroy the life of any animal that falls within his power.

— This Bear at present inhabits the country adjacent to the eastern side of the Rocky Mountains, where it frequents the plains or resides in the recesses of wood which skirt along the margin of water courses. There is some reason to believe that the Grizzly Bear once inhabited the Atlantic regions of the United States; it would be allowed to form any inference from traditions existing among the Delaware Indians, relative to the Big Naked Bear which formerly existed on the banks of the Hudson. The venerable Hackensack informs us that Indian mothers used to frighten their children into quiescence by speaking to them of this animal.







small rivers, which discharge their waters into the west side of the Gulf of California, near the dividing line between the provinces of Baviya and Sonora. We supposed at the time to be somewhere along the foot of these mountains, and fell in with the Indians who had them, when I conceived the idea of bringing them to the United States, for your exhibition. Although then more than 1000 miles from our Eastern port, Natchitoches, I purchased some of the young, and for three or four days made my men carry them on their hips on horseback. As they could not sustain any exertion, they were in danger of starving. I then had a cage prepared for each, which was carried on a pole balanced between two packs, but always ordered them to be let out the way in which we walked, and not shut up again until we were prepared to march. By this treatment they became extremely docile when at liberty. Following my men, whom they seemed to distinguish from the Spanish dogs, by their seeking them, and accompanying with them, like dogs through our camps, the small villages, and fairs where we halted. When well supplied with sustenance they would play like young puppies with each other, and the soldiers, but the instant they were shut up and placed on the pole, they became cross, as the effect of the chain knocked them against each other, and they were sometimes left exposed to the scorching heat of a summer sun for a day without food or a drop of water, in which case they would worry and tear each other, until nature was exhausted, and they could neither fight nor haul any longer. They will become year old on the first of next month—March, 1848—and, as I am informed, they frequently arrive at the weight of eight hundred pounds.\*

\* The Grizzly Bears remarkably tenacious of life, and on many occasions numerous rifle balls have been fired into the body of an individual, without much apparent injury. Instances are related by the travellers now have explored the countries in the vicinity of the Rocky Mountains, of from ten to fourteen balls having been discharged into the body of one of these Bears before it expired.







was then placed in a pit, which the animal had dug for its reception. This Bear strikes a very violent blow with its fore-paw, and the claws make dreadful wounds. One of the cubs, as before mentioned, belonging to the Philadelphia Museum, struck the other a blow over part of its back and shoulder, which produced a large wound from a deep cut. It is stated in Long's Expedition, that a hunter received a blow from the fore-paw of a Grizzly Bear, which destroyed his eye, and crushed his cheek bone.

"The Grizzly Bear is unable to climb trees, like other Bears; he is much more stimulated by the voice than the aspect of man, and on some occasions, when advancing to attack an individual, he has turned and retired, merely in consequence of the screams emitted by him. The degree of ferocity exhibited by the Grizzly Bear, appears to be considerably influenced by the plenty or scarcity of food in the region which it inhabits. Anterior to the time of Lewis and Clark's expedition, nothing very satisfactory was known in relation to this Bear; and it was not until the publication of Long's Expedition to the Rocky Mountains, that a correct scientific description was given by that distinguished naturalist, Say.

"It may be with certainty distinguished from all the known species of this genus, by its elongated claws, and the rectilinear or slightly arched figure of its nasal profile. Its general appearance may be compared with the Alpine Bear of Europe;—*U. Arctos*—especially with the Norwegian variety. The Alpine Bear has not the elongated claws, and the facial space is deeply indented between the eyes. This bear is also a chamber; the Grizzly Bear is not.

"On the front of the Grizzly Bear the hair is short, and between and anterior to the eyes it is very much so. On the rest of the body, it is long and very thickly set, being blacker and coarser on the legs, feet, shoulders, throat, behind the thighs, and beneath the belly; on the snout it is paler. The ears are short and rounded, the forehead somewhat convex, or arched; and the line of the profile continues on the snout, without any







ears, 2 to 4 inches, on neck, about 4 inches; on the shoulders, 4 inches; on the chest, 5 inches; on the belly and behind the forelegs the longest hairs are 6 inches.

"These measurements, as taken from two adult bears, which were by no means fully grown, may be perceived by comparing them with the measurements furnished from Lewis and Clarke. The total weight, however, for years before the present project, is not known, although which have been previously given is then more minutely detailed and very carefully made. *—Audubon's Journal of Natural History.*

"The Grizzly bear was traced near the Sacramento in California. The fur, of this animal, said sometimes to be as large as that of an elephant, is the same as that of the Indian, and varies with the seasons. Its teeth are said to be prodigiously great, and it is never known when forced to drag three loads, and when hamed in the Bull and Bear fights protracted in California, will slack the charge of a Bull by putting out one of its paws.

"They will also ascend the rocks for the acorns, and break off branches so large as almost to ruin the tree. It has been generally supposed that they do not climb, but all the hunters here testimony that they can do it, although slowly and clumsily. They are seen less numerous than formerly; indeed, it is alleged that the lower country near the Sacramento, was once so infested by these bears that the Indians were obliged to keep to the highlands when travelling.

"It does not attack man, but its enemies when it has them in its power, rarely attack it, unless he comes upon him by surprise, and is not considered a dangerous animal.

"Accidents are told of hunters who had fallen into the power of Grizzly bears, who would cover them up with brush, grass, or bark, and put them down without further molestation, so long as they remained quiet; if they attempted to rise again, the bear would again put them down, cover them over with bark, and finally leave them undisturbed.



"Tinamous four are usually seen feeding together. The cubs are remarkably small in proportion to the fully grown animal." — *United States Exploring Expedition, Lieutenant Walker*

## THE WILD TURKEY.

### MEGALOPUS GALLOPAGO.

"This noble and beautiful bird, the origin of which is supposed to be extended, if not derived, from the great island of the West Indies, is the poultry world as now, like its companion the Painted Pheasant, the Houdou, the all but extinct in the Eastern and Middle States of the Union.

"A few of these noble birds are said to be extant in Vermont and Maine. Massachusetts unfortunately contains a few in her mountainous wild regions. The authorities of New York also report some, but no specimens obtained by this magnificent people of game and forest hunters, who believe that a single specimen exists in the State of New York, say among the wild ridges of the Mohawk. However, the Greenhead Lake, Penn. Pennsylvanian mountains, the Allegheny, the Allegheny, and in all the wooded portions of the West to the Rocky Mountains, the South, through the great ranges of Texas, and Northern into Upper Canada, through yearly becoming so numerous, that several specimens have already been taken by the sportsmen of the State. I have great doubts in my own mind whether this bird existed at the Plymouth time. Although it is rather a question that it then existed, because no specimens which are now found in the various States are from the southern extremity of the great Appalachian range, it being worthy of remark, that it is rarely found in the mountainous regions of that great mountain range, that they are found at present.

For some unexplainable reason, Wilson has not described it



mentioned this bird in his *American Ornithology*, although it is impossible to conceive that he was ignorant of its existence, any more than that of the *White Swan*—*Cygnus leucos*—the latter bird especially frequenting the waters adjacent to Baltimore where he resided, and the former, I imagine, being in as day even more than it is present, a common article of sale in the markets of that city.

"Despite, however, his eloquence and ability as a writer, and his scientific and accurate accuracy as an observer of nature, it appears to me that Mr. Wilson was in no respect a man of system. He seems to have potted down his notes concerning every new bird or species, as he met it, to have thrown them pell-mell into his portfolio, and thereafter taken them out in a haphazard patch to patch them without arrangement certainly, and perhaps without much revision. It appears to me that a carefully revised edition of Wilson's *Ornithology*, systematically arranged, completed to the latest modern discoveries, and amplified with copious notes, is one of the desiderata of the literature of the day. This book, as it now exists, being so confused in method, and so incomplete, as to afford a very imperfect idea of the *Ornithology* of America, while the great and splendid works of Bonaparte and Audubon are so costly as to be almost entirely beyond the reach of the ordinary purchaser.

The following description of our bird is from the *Birds of America* by Mr. Audubon: "Of its manners, habits, and habits, I shall speak more at large when I come to treat of it as an object of pursuit as game.

"Male, 49.68. Female, 37.54.

"Breeds from Texas to Massachusetts and Vermont. In the spring runs to the Missouri, and thence northward to Michigan. It migrates northward, crossing considerable distances in autumn in pursuit of food.

"Bill straight, not distinctly arched, rather obtuse, the base convex, the culmen moderate, upper mandible with dorsal outline curved, the sides convex, the culmen overlapping, the tip a little depressed, and mandible somewhat bulging toward the







with brownishwhite, gradually becoming deeper toward the proximate feathers, which are uniformly brown. The lower part of the back and tail coverts are deep chestnut, banded with green and black. The tail-feathers are of the same color, subdistally suffused and minutely sprinkled with black, and having a broad, blackish bar toward the tip, which is pale brown, and minutely mottled. The under parts are darker. Breast of the same color as the back, the terminal black band not so broad; side dark chestnut; abdomen and thighs brownish-gray; under tail coverts almost glossed with bronze, and at the tip bright reddishbrown.

"Length, four feet one inch; extent of wing, five feet eight inches; tarsus, one inch and a half; along the ridge, two inches above the wing. Culmen, seven inches and one quarter; middle toe, two inches; hind toe two; gasteral appendage one foot. Such are the dimensions of an individual of which I made a drawing, which I need not say was a fine specimen.

"The female is considerably inferior in size, with the wattles much smaller, the tuft on the breast comparatively small, and only in old birds. The color of the plumage duller, there being but little of the resplendent hues of the male, the lower parts brownish black. The young, before being fledged, are pale brownish-yellow, pale yellowish-gray below, the top of the head lighter, marked in the middle with a pale longitudinal brown band, the back and wings spotted with brownish black, excepting the smaller wing coverts, which are uniformly dull brown."



## FOREST SPORTS.



WO only of the eleven noble animals, which I have recounted and described above, are peculiar, and but four now indigenous, to the Eastern States and Canada; although it is certain that two at least, if not three, of the others, were formerly found to the east of the Delaware, and south of the great lakes.

The Moose and the Caribou, at least, I find, and possibly never have existed, far to the westward of the River St. Lawrence, connecting Lakes Huron and Erie, south of the last named north-west lake. With the progress of time, and with the advance of civilization, have not hunted them to become southern animals. The Common Deer and the Black Bear, are still indigenous from the extreme northeast, to the south-western regions of North America, as were undoubtedly the Elk and the Wild Turkey not many years since.

With the Moose and Caribou, I shall therefore commence my undertakings, get through those sports which may not be engaged to the eastward, in the first instance, before plunging into the great western wilderness.

The Moose, as we have seen, is a native only of the colder and woodland regions of the continent, being a browsing rather than a grazing animal, — as his peculiar conformation, the short



ness of his neck, and the length of his legs, clearly indicate. On open plains he could scarcely exist, and his favorite haunts—to which is due his existence at the present moment—are the depths of forests and woodland morasses, which probably never will be cleared, owing to the severity of the climate, and the sterility of the soil.

The most southeasterly westward point, at which this noble specimen of the Deer tribe is now known to exist, is that singular land tract, to which I have before alluded, composed entirely of an aggregate of mountains, rock ridges, and pine-girdled, interspersed with a perfect network of lakes, rivers, and morasses, lying between Lake Champlain, Lake Ontario, the St. Lawrence, and the Black River.

Here it still breeds, and yards in winter; here it is yet killed by the hunters, and by the few Indians who yet linger in that region, or visit it from Canada during the season of deep snows, for the purpose; and here it may still be found, especially in the vicinity of the Raquette Lake and River, at the latter season, if I may rely on the authority of my friend, Charles F. Harris, one of the first explorers of that romantic region, and one of the most enthusiastic of American woodmen, who has sung in his beautiful poem "Kachessoo," that in Lake Umbagog—

" For fish and deer at either end,  
The rifle was good, but run-ways more  
Thence by crooked Kachessooon,  
And Raquette at the head of spearing,  
As well as that for yarding Moose,  
Hath both enough for hunters' use."

Eastward of this wild and romantic tract, the hunters' terrestrial paradise, it will scarcely be found south of the Canada line, until we reach the Dean River, famous for Arnold's winter march against Quebec; and the vicinity of Moosemen Lake, in Maine, though it is possible that a few may occasionally cross the line from the Eastern Townships of Lower Canada, about Lake Umbagog, where it is still abundant, into the northern parts of Vermont and New Hampshire. In the northern parts of Maine, what was formerly called the disputed territory,







just, that the Caribou, or Reindeer of the forests, is when adult not inferior in size to a yearling deer, and that the old males, or bulls, as they are termed, are often found from fourteen and a half to fifteen hands in height. In hunting, no person who had ever seen an animal of the size of the animal in question, could think of comparing it to painted deer, better than Deer of America.

It is this difference of size, especially, which has led to the belief that the Caribou is a distinct variety, or that Reindeer from that species. The chief action of food to the Reindeer of the winter, and those hunted by the Esquimaux of the Arctic coast. That animal, however, found in Europe and America, is identical in the two continents, south of the Arctic Circle, on a degree or two above it, with the Caribou, and less numerous north of that and 60th degrees north, but also, a difference of range and climate, which cannot be explained on any ground of comparative temperature, and which would go far toward the establishing of the difference.

Indeed Mr. HARVEY WATSON, an English gentleman of rank and education, many years a resident of New Brunswick, who, so far as I know, is the only practical sportsman who has written of Caribou hunting,—and, New York Turf Register, vol. ix, p. 134, and Porter's edited Forest & Game, p. 426,—speaking of it as an animal *manifestly* distinct from the Reindeer. "By the way," says Mr. Watson, "it is an entirely common mistake to two of our countrymen, named by Charles Spitzbergen, among you know, and I must have seen some Caribou hunting. The Caribou of the interior are very like Reindeer, a little larger; they travel with the same swiftness, and are used to the snow, and a bull Caribou has half of the musk-ox's tractable stout legs, and when in the rut, is of the same antlered shape."

Again, at two pages farther on in the same paper, he says, "his horns resemble those of the reindeer, or even are—" As that is the first time you have seen a Caribou trail, you must observe it is much like that of an *Ox*, since that the cleft is much more



open, and the extremity of the tail-feather being very long and flexible, comes down the whole length on the snow, and gives the animal additional support."

Now Mr. Wadsworth undoubtedly perfectly well acquainted with the general appearance and habits of the *Reindeer*, which, if not known to him, must have been frequently exhibited in Lincoln's museum— I remember a herd of thirty or forty individuals, shown at the Egyptian Hall, Piccadilly, not very many years since—and could scarcely fail to detect a decided difference in build and the structure, reported size, colour, &c., between what is called an *Ours*, and could not compare the track of a reindeer with those of the American Deer with that of one so manifestly dissimilar.

Hence I was rather that there are at least two distinct varieties of the Reindeer—the Arctic and the European—than that Mr. Dik is has taken the descriptions of the American Reindeer or Caribou from the Linnean illustrations, and has not observed, or known the difference between the two distinct contingents. It may be however that some of the animals mentioned in the account of the Arctic specimens, and that they are both of one original species.

Again, the gentleness and placidity of the latter, as well as its speckled and dusky colouring, contrasted with the European Reindeer or English Sparrow, and the greyish brown, along of the Reindeer of the Arctic, and the more common American features in common with the Caribou, are very rarely found in pairs of above four or five, and as yet to my knowledge—in herds exceeding twenty.

It is, moreover, the shyest and wildest by far as well as the fleetest, swiftest and the most numerous of the forest animals, more than the Moose, which can scarcely be run down, when the snow is deep and crusted by a strong layer of green lichen, whereas the Caribou is so difficult of access, and so great is the velocity and continuance of his flight that when he is once alarmed, and has taken himself to his heels, it is considered utterly useless to pursue him farther.

With these few preliminary observations—which I judge are



essence, in that I differ somewhat from Mr. DeKay, although to the best authority I can meet on the subject, both as regards the size and habits of the animal. I shall proceed at once to the subject of *Moschus* and *Caribæus* Rantze, which I shall include under one common head, inasmuch as they dwell for the most part in the same localities, are hunted with the same apparatus, the rifle, namely, and the snow-shoes, without the aid of horse or hound, and, with some small exceptions, in the same manner.

I will only add here, that I have no hesitation in affirming Mr. DeKay's correctness in including the *Caribæus* among the animals of New York, since it undoubtedly exists in the district I have named above, of which Hamilton's County occupies a large portion. We find, and of this the *Caribæus* will not be found, I imagine, to the south of the Ottawa River and Lake Nipissing, or the 45th degree of north latitude, at the very highest.



## MOOSE AND CARIBOU HUNTING.



**F**OR the pursuit of neither of these noble animals, the largest, fleetest, and most wary, can be made without the assistance of the help of local residents. The nature of the ground which they inhabit, and over which they must be pursued, settles the decision in almost all the questions consisting of the hunt. The most important feature of the pine, birch, and white cedar forest, which covers so large a portion of the district where they most abound, and where very often water poured with deep snow, and numerous rivers, flowing to the north, prevent the use of the cleft hoof of the ruminating animals.

It is impossible to walk upon the surface of the snow, for the deer, when the depth of the forest is not more than six inches, and which is much less with the very weak, his only enemy by even degrees, is himself, as he is unable to maintain his feet, but when the ice and weight is superadded the feet, leather and ponderous and spreading hooves, which they bear on their heads, and the long and light Moose even try to strike with them, and when, one would imagine, must hopelessly entangle them in the tracks, it is impossible to get out for the same and country with which they will pass through the heaviest growth of forest.

The hunter is compelled, therefore, to pursue—when he does pursue such these giants of the extreme season, but could for this reason be called the hunter of the extreme season, when the speed of the animal, when once alarmed is so great, that it is well questioned whether even in open country, and with mounted hunters, it could be run down, or even run from, and into view, by the fleetest Fox hounds. When we consider, how,





THE MOOSE







ever, that, in the wooded fastness through which the deer ever lies, it is utterly impossible to keep the hounds in harness, and that they could only serve to reveal the swiftest and quietest swifter and nimblest yet, it will seem somewhat paradoxical that hounds must be deployed with a true species of bravado.

The craft of the woodsman, the hunter, and the sportsman, however, looks at the habits of his quarry, and the only ones on which the hunter can rely; but by these, and the aid of weather, he hunts, he snags and lures, shuffles, beyond their fatigue, and overhauling which gives its object a rest to lie in the woods, in following these an herd man in the northern wilderness, rather than of the unerring rifle.

During the rutting season, in these summer months, there are two methods by which the Moose may be taken with something approaching very nearly to certainty, by those acquainted with the country, and with the instincts of the creature. At this period of the year, like a boar of the Deer species, the Moose is terribly annoyed and tormented by insects, especially by that pest of the woodland wilderness, the blue fly, and as in the habit of resorting to the ponds and lakes, which are interspersed everywhere among his forest haunts, for refuge from his blood-sucking enemies. Here he will wallow as in a long sea, with only his head and antlers above the water surface, will wallow about for hours, secure from his winged foe, now and then delicately on the floating leaves and banks of the various kinds of lotus, water lily, and other aquatic plants, and luxuriating in the coolness of the pure element. Of this habit the hunter must take advantage. Concealing himself before the first appearance of the eastern sky, well beyond of the trail, by which he has previously ascertained, by water proof, that the Moose enters his forest with his quarry and its haunts, listening with attention to the slightest crack of the dry twigs, the lowest rustle of the parted branches, and is for the most part rewarded by a point blank shot at the huge, unsuspecting quarry.

Another, and yet more fatal method, by which man treacher-







in the arm, or whose rifle misses fire at that crisis. A full Moose, so taken in or captured, stands in height, with antlers of six feet spread, and horns as big as an Ox's the edges of which cut like a scimitar, and which he can handle as deftly as a prize-fighter, is anything but a pleasant customer in close quarters.

Sometimes two or three bulls will come together, and fight out a forest tussle in the presence of the hunters, and the grandeur of such a scene, witnessed in the pale moonlight in the depth of the untrodden forest, must be exciting and magical in the extreme.

A tale of this sort has been so graphically and characteristically described by the gentleman to whom I have referred before, Mr. Barton Washop, in the eleventh volume of the *Tout-Regarde*, that I cannot resist the temptation of extracting it for the entertainment and instruction of those of my readers, who do not possess that once excellent, but now, alas! defunct, periodical.

"We reached Adah's wigwam," says he, "just as the sun was taking his last positions over the western mountains, and though we had walked some eighteen miles through a thickly wooded country, we agreed after supper to take a sly at the Moose.

"No time like the present," said Tom, "we have a lovely moon, the forest moon is just full, and I am too anxious to sleep. My gun's in rum!—shoulder blind dogs!—cock gun to the hounds!—line of command given!—are you ready, gentlemen!—march!"—and off we went.

The next October, in some challenge upon us as we strolled forth, and next to no experience, we did. Howard had pleased to take upon him to keep under blessed guidance, and I began to think we were on rather a wild expedition.

"In the name of our great Nimrod!" said I, "do, like a good fellow, come in and show what we are to do, and how we are to shoot Moose at this hour of the night."

"There was rather a puzzle me," replied Howard: "I am quite as much in the dark as yourself, never having before tried







gun on his back, has begun to let someone under his pull, more  
harder some hold."

"We'll just avoid it and let them go," said a man behind the Mouse.

... Of me, white man tomorrow may be heard to say, may be  
 he will wound Me, then Me will wound him again, and so. We  
 must be able to face any Indian who dares oppose us.

[illegible][illegible]

"We were all too young, too inexperienced, the kind of 'old' the half-breed called 'old' was a long way from the real thing. Our rifles were examined and we were instructed in a short time in some things we should know about half an hour. We had never could distinctly hear the tramp of the soldiers as they marched, the thud of heavy arms, but time was, to say it, and the old man's position in the muzzle of your gun—well, to my own pain, I must confess my feelings were excited to a degree I had seldom before expe-



[illegible]



sprung from the ground, and by a sharp blow from his axe, severed the tendon of the hind leg of one of the bulls, and instantly dropped it in the thicket. The wounded Moose rolled over upon his side, and his adversary commenced goading him in a most dreadful manner. I felt pity for the poor helpless bull, and was taking such note of my future adversary, when I was again prevented by the Indian. Adella now put her call to his lips, and imitated the howling of a cow. Moose quick as thought was up and rushed, and advanced towards us—the howling now repeated, and the Moose actually came within ten yards of our ambush. But to your secret—"smell a rat," and so doing, it bounded like a deer, and dashed madly into the thicket. The Indian now gave the sign—two bulls entered his bearing, and he sank upon the roof motionless. The Indian now stepped back, and after dealing the same strong Moose a stunning blow on the head, drew his keen knife across the throat of the prostrate bull.

"Well, my boy, there lay our two combatants, 'twas a glorious sight that forest post. But I cannot but think our game has been killed most ungenerously—Adella, why did you not let us shoot the Moose?"

"Why, we thought brother maybe only wound him—then we get him—maybe Moose make fight, then maybe kill you—best make sure."

"He's right," said Howard, "these fellows always look out for No. 1. You know our bargain to let the Indian have the carcasses, save our hind quarters—we the hide and bones. Now that Moose will worth nearly three hundred and fifty pounds, and the venison, which to-day is the most delicious of all meat, is worth sixteen pence per pound at least, so he was somewhat shrewd. Yes, yes! I know these people pretty well, they have been the best treated often by the white men, they have learnt to act from them. Before I knew this family I was often deceived by Indians. I was once left in the woods near a lone town, my settlement by an Indian whom I had hired to carry my traps to Indian trading. He went off on a



I have been at work a year & I am not getting any money  
 from the bank. I have a small amount of money from the bank  
 but I am not getting any more. I am not getting any more  
 from the bank. I am not getting any more from the bank.  
 Adella P.

[illegible]

As the first session of the 1901-2 Meeting of the British Association of Economists, it was a landmark in the history of the profession, by providing a meeting place for the first time to the representatives of the leading universities and the leading economists of the day. It was the first time that the leading economists of the day met together, and it was the first time that the leading economists of the day met together.

[illegible]



placed him on a boat at the mouth of the stream. A gentle mountain breeze had sprung up, changing the surface of the forest with overhanging the lake, and turning that beautiful rougher water into a mirror of the heavens. At the first cast, three Trout ascended as they descended with the assistance of Adèle; I landed two, but got so wet and so tired, that after a ten minutes' repose, compelled to abandon the chase, and when I was permitted forth by Adèle's eyes, and put me down to my sport, I had twenty-two trout lying on the bottom of the stream.

After a hearty breakfast, we again embarked, and started down the river. Howard and Adèle were in advance, and I moved the middle of the row of boats, some down a rapid. Indeed I cannot describe what to behold their direct graceful figure, at the young Lady's stopped to the west, the dusky skin shone in the morning sun, turning east, and then in the stern of the canoe, in the world he was sped, stout pole, some twelve feet long, and with quirk eye, and ready hand guided her frail bark from the dangerous rocks upon which she each moment appeared about to be dashed in pieces. The *thameshore* was now three miles long. We now entered a lake very similar to that we had left. Wildfowl were plenty, but *Sabane* recommended abstaining from shooting, as we expected to find Moose at the lower end, on the margin, or willowies in the stream. The Indians having resumed their paddles in the deep water, reached quietude, passed three lakes, and many consecutive streams. About midday the sun became so overpowering, that we resolved to take shelter on the first grassy bank we came to. The canoes were hauled up, and we cast our eyes on the shade of a large, pitiable cedar. I had smoked my last pipe, and was composing me, for a daze, when Adèle, raising a sign to us to be quiet, cast herself flat on the earth, and issued husband to the water's edge. In a short time he returned to us with the joyful news that two Moose had entered the stream a short distance below. Then he had *gazed* such was the case, before he obtained a full demon-







forming this during that, he turned, stood erect, and with a look of triumph waved his hand, and uttered a yell of delight. Saboteur answered the cry, and the river mothers strained every nerve in the race. No hunting in ever before had found more merry team did no post brought water. She seemed "a thing of life," and well did she answer her cry, "size up!" she flew skimming like a swallow on the surface, and nasking the rude waves which, as the salmon leapt, seemed to roll in an opposite direction. Oh, we watched. Now the Moose came in view—now a head in the stream hole—there—and now again their broad outlines were seen moving to and fro on the rugged water. We rose, leaning rapidly, and the chase was becoming every more of more and more exciting. Ah! he was still some distance in advance of us, when our sharp team led to the game and our comrades, and before we rounded the rock, the sharp crack of a rifle told me Howard had got within range. A moment, and we dashed round. The scene was wholly changed. Instead of a foaming torrent, rugged rocks and towering hills, the stream was now broad and placid, the banks verdant and easy of approach. The Moose were still struggling forward, and appeared to be making for a thickly wooded island in the centre of the river, nor could all the efforts of Adella prevent them from accomplishing their purpose. Our companions now poised, as if sure of their bow, to act, but Saboteur, with a cheery cry, dashed on, and placed himself between the island and the main land, and Adella, taking the hint, gained a position so as to guard the other side. Saboteur soon rested for a moment, and looking over the side of the river, took a long draught of water. He looked as fresh and vigorous as usual, and though the day was excessively warm, and hot, yet not a drop of moisture appeared on his sunburnt brow. After waiting some time in suspense,—  
 "Sit down, mother Howard send dog to dry. Moose," muttered the Indian, in a low, mysterious tone. No, was he mistaken; for we soon heard the cry of the dog—but it was of short duration, and again all was quiet, when Saboteur uttered a yell that made me almost spring out of the canoe. The Moose had







You are done up, as we say. I thought that but for me, the rapid would have drowned you. You must back toward, Adèle! they must not fall back. No! Move! back, at my bid, toward!"—and Howard, to my astonishment, seeing another pole, sprang to the bow of the canoe, and it was a long time before he was deep enough in the water to be able to stand. He was in a moment disengaged from the rapid, and I saw him standing firm in the trench of the pool. A period of half a moment passed, and we continued our course, and before long I perceived my boat was in the whirl, instead of my boat in the head of the canoe, as I might have supposed. When I perceived that Howard, who lay behind me, was in the same predicament, and between me and him Sebastian was to prevent their coming to the danger, and presently he was in the same predicament. They could not long maintain their advantage. Thus we proceeded, and the trail of dead and the sea changed all my attention to a top of a pool of the sea, and smoothly over our heads, and our vessel shrouded in mist, wrapped the whole scene in a momentary haze: down came the wind, rushing between the high rocks, and beating us to pieces into a white foam. The post office seemed to tremble in its frame, with a dark brown man, his white hair, deeply creased his forehead, against both the tempest and the force of the current. I now began to think we had better have taken the advice of the elder Indian. The large rock, on which we grounded, was sliding on its approach, and we could not trust our feet would save them. To turn back was equally impossible, as had the canoe been caught to me and taken the rock on her beam, she could not have saved herself. The moment I turned for some time, I saw a canoe. I saw, when the report of a rifle brought my recollection back to me, and I now thought I could discover that object drifting down the torrent towards me. I was not mistaken; it was Adèle's canoe!—and, as it flew past, I could perceive the forms of two persons lying flat in the bottom. As the tempest was now at its height of fury, it required all the skill, nerve, and strength of Sebastian to keep the head of our canoe to the wind. His eye was steadily fixed on



looking down, his teeth shown, back so close to me as to angle  
 with my back, which was pressed twice as close to his others,  
 and with his feet spread up the upper end of the bed, as mine were  
 but under the covers of my bed, I could not see what he was doing  
 or saying. He was started the position of my feet, and only  
 said some faint words and moved all the time, but not the least  
 bit of his body, and in a possible moment or two he was meeting  
 this man's face, and fully exposed the new position, where  
 we could have seen the angry face, but as I could not move  
 from I could not see what passed, yet I perceived how he was  
 with great force, and some softening times. I could not  
 make out his face, but still his words were a great deal  
 what the angry had done to the Moor. I was not, however,  
 fighting with him, and my sword, for the 90% of his force  
 was good, but not the kind of power that we had  
 first time, and he had put 90% of his force on the same  
 and turning his face, we could not see what he was doing  
 the other end of the camp, as he was, I was, and he  
 possibly I thought I had made some progress, but at my  
 heart, and the more I could I could not see the other way.  
 He was very kind, and the Moor was very kind, and  
 would in his own way, and I thought he was very kind,  
 and the Moor I thought was very kind, and he was  
 he appeared very kind, but he was not the same as he  
 started off again in search of his master.

The stream poured off a grassy slope and entered the lake again, bounded by rocky banks, and the water became dotted spot by spot with a golden orange. So the water, as the sun rose, stopped at the entrance to the pool, where, just like a deer, he came soft to the bank, and he looked up at me. It appeared the Indian had seen me, and he came to the top of the hill, and I came to get, and lay on the rocks at the point from which we had just viewed the Moose. The first I saw of me and we were at the point, as I supposed, did not seem to increase my anxiety. For this spot we were near, and so how my heart thrilled when I saw the shattered woman-stone!



on the rocks. We landed, and scanned in every direction, but could discover no trace of our friends, and had almost given them up as lost, when a quick and merry bark from Billy renewed our hopes. We followed the sound, and soon found Howard and Adella. Billy, in utter contempt of his wounds, maddly careering round them. Ours was indeed a joyful meeting; and now that the danger was past, we had a hearty laugh at the sport. It appeared that Howard and Adella, heedless of the storm, had struggled on in pursuit of the game. The foam and spray had everything ten yards from them, when on a sudden they came on the Moose standing on a shallow, and apparently terrified at the prospect. Howard instantly dropped his pole, seized his rifle, and fired,—the canoe then round with the wind, and Adella being at the command of her, they threw themselves in the bottom as a last resource. The last thing they recollected was the canoe being dashed to pieces against a rock. When they came to, they found they had been cast by the force of the water many yards on the point, but had not received any material injury. When the dog found them, they were on their way down the river, as Adella said he thought Sakatawe would run his canoe on the island, if he could escape the rapid. 'I am sure,' said Howard, 'I saw the Moose I shot at on the shallow, fall; as for I was so near I could not well miss it. What think you, Sakatawe, have we any chance of finding it?' 'If heeler kill him, he be certain soon found, but guess meat were not very good—water in rapid very much strong, and rocks sharp.' 'Well,' said I, 'we are sure, I trust, of my fellow, as I much wish to send his noble antlers and handsome jacket to England as trophies. They have a very poor opinion concerning the sporting in the Prairies, and very little better of that of the United States: indeed, I have seen it stated by more than one writer, that a gun is an almost useless article in these parts, as there is not any game worth mentioning. The fact is, these feathered sportsmen drive through the country, visit the principal places, make a few inquiries, take a short excursion, perhaps not three miles from







could show us. When *hanting* of spurs a novel character. We remained putted one day with *hanting* birds is pretty square, and then turned the *Yaspis* which we are now engaged to, and spots, highly gratified with our excursion."

Having disposed of the latter case, we passed to Moscow and Chirchik, starting during the summer, and soon made in advance come to their point, at the period of the year when it is but as the greatest part of the known extent of the true woodland, I am in the case with the *Yaspis*, is that.

So soon as the deep snow has fallen, and the snow surface of the spurs is complete, throughout a month, it begins of extent, by a continuous many feet in depth, constituting all of the most numerous, and apparently the best of the wintering of the birds, in the largest degree, for example, at the wing and foot, in the Moscow and Chirchik, to form over the ground and in the air, and utterly impossible for them to maintain subsistence from the soil, these birds then are wont to distribute themselves into parties, ranging in number from three or four, to twenty and upwards, and to form what are called "*yards*" for their winter habitation.

This is done by trampling down the snow regularly, and in due form, over a tract of ground of less extent, according to the number of the troop, until it is destined to home, until the whole is a uniform level of snow, and the birds are then a thrashing floor, while the enormous snow is piled up by the steep walls of the upstanding snow drift, which often accumulates to the height of several feet, by successive falls of snow.

These "*yards*" are usually formed in a situation sheltered from the prevailing winds, by some point, bank, or some other object, and where there is a lot of grain, or other food, and the amount of food, and within the area of the yard, evergreen upon the ground, and a great deal of which they are wont to feed. Within the limits of these yards they regularly arrange in flight, and when during the winter of heavy snow fall, now, after they have once established them, do they absent them-







sportsman, on the mountains, within a few miles of Montreal, during a morning's walk, from that populous city, in the pursuit certainly, if not of *reds and blues*, of much *redder* *bluer* than the gigantic and wide-antlered Moose.

My friend, Alceste, of the lower province, the first walker, by the way, and one of the best, made it was, even any fortune to encounter another side of the Atlantic, some day, if I mistake not largely, I did *know* of the slaughterhouse on the river St. Maurice, in the heart of the pretty valley of Three Rivers, all of which he ran into upon snow shoes, after a chase of, I think, three days.

As it is necessary to encamp out during these chases, often for several weeks at a time, and as it is very undesirable to discharge a gun at long small game during these excursions, for fear of alarming the legitimate objects of pursuit, it is necessary to carry not only provisions, but food, drink, tea, spices, clothing, and blankets, for several days' consumption, and nights' comfort. These are packed upon small light sledges, or *chairs*, *grouas*, as they are called, which are made of light wood by the Indians, and can be drawn along over the crested surface of the snow, loaded with a weight of 100 lbs. either of provision, or of meat on the return march, by a single man on snow shoes, without diminishing his speed, which may be reckoned at five or six miles the hour.

The provisions usually carried by sportsmen on excursions of this kind, consist of salt pork, mutton, venison, coffee, and liquor, such as the taste of the party may suggest, and on these articles, and on a few edibles as corn, rice, and sugar, a party may not only be well supplied for their usual riles, for many days, not only comfortably, but luxuriously.

For the purpose of doing pursuit satisfactorily, as food on the snow-shoes, cannot which it is impossible to carry, my length will upon snow on each sledge, when there is constant exert, a good deal together upon these will run down a Moose, even if alarmed, and at last speed, to certainty, in a race of ten or twelve hours' duration.







Immense speed can be made on the arrow shot by the practised runner. I have heard the rate of a famous Indian, when at his full speed on level ash-grounds, accounted as equal to seven or eight miles an hour, and this pace is certainly beyond all a word for the moment—but had a day, or better.

The best weapon for this sport is the rifle, and I cannot too strongly urge upon all amateur sportsmen the immense superiority, as a sporting implement, for quick destruction at some motion, and especially at black contact, of the comparatively short long-barrelled piece, carrying a load, certainly not smaller than 40, 100, or 120 lbs. to the pound, *steering after the manner of an Indian's guiding pole*, and fixed—*not* from the shoulder to the foot, heavy, ill-adapted, ill-bored rifle, with a peaked heel-piece, much an ordinary used in America.

However excellent these may be for a very close practice, at very small marks, such as squirrels, or the like, or for target practice from a rest, or with deliberate aim, they are utterly ineffective for rapid snapshooting at animals in quick motion, while for long shots, across wood especially, the smallness and lightness of their metal cases the bullet-hole blows many an arrow sometimes even feet, to leeward.

Another objection is, that though a bullet has neither the weight nor the force sufficient to make the *lower end*, though they may make the *barrel*, and that the small wounds made by these are useless, with often, especially in fat animals, close so completely over the *muscles* to prevent the flow of blood, which from accumulation around will speedily exhaust the quarry, and bring him to the ground.

To shoot down a large animal, with balls of 80, or even 120 to the pound, is almost of wasted security, as the stricken quarry will run to some great tree, his death wound from so paltry a missile, and the hunter shall lose his labor.

The best sporting implement of this kind in the world, is undoubtedly Purdey's double-barrelled rifle, and, although the use of these was at first rebuked by the hunters and trappers of the West, its superior execution and utility is now fully ad-







Brigade is eight hundred yards. Whether this be exact or not, I have seen wonderfully accurate shooting made with it, by the ordinary rank and file of Infantry Regiments, at three and four hundred yards, and should consider six hundred yards worth five minutes' purchase, if set up at that distance to two, any one of fifty or sixty men of her Majesty's 1st Highland Light Infantry.

I am told that William Moore and William Gray, of the Edgeware Road, London, are doing much better than before, telling tales on this principle, and were I bound to the premises, taking out a considerable number of quality and ease of loading, portability and compactness, the simplicity of the engine, and the saving of friction, which I presume gives the extended range, I would prefer one of these mechanical weapons, to any implement of destruction in the known world.

Some able writer, on the branch of shooting, has observed, I think very correctly, that the difference between American and European, i. e., Scottish or Tyne-side rifle shooting, consists mainly in this,—that whereas the American workman, with a ball no bigger than buck shot, or even smaller, will knock the eye out of a squirrel at sixty yards, where the European would probably miss the animal altogether,—the latter, with his ounce bullet, will be nearly sure of a Mink, a Red deer, or a Chamois, at three or four hundred yards, when the former would not so much as think of firing at it.

True & true, he might, however, have added, that the European being compelled to shoot altogether in the open, while naturally inferior to the American at still or sitting shots, and at rest, is often so far superior at animals in rapid motion.

All these points can be traced to the circumstances of the case. Except on the prairies, where shooting is comparatively rare, the nature of the country precludes the possibility of long shots, whereas man himself rarely is seen sixty yards off in the dense forests of America. The same dense covert gives facility for starting an animal, and shooting it at rest, to the American hunter, which has led to his fabricating his weapon in that form which is best suited to a very sure, deliberate aim,







breeches and leggings, and an ordinary winter shooting-jacket and waistcoat, over which may be placed an Indian hunting-shirt of blanketing, and if this latter be pure white, from its similarity to the hue of the sun, it will, perhaps, be less conspicuous to the animal than any other color. There is, however, a coarse-woollen stuff of a kind of *dead dog* fur, manufactured by the *Astorian* in Lower Canada, which is very well suited for the purpose. A turban will be found the most commodious head-piece.

The hunting-shirt should be confined at the waist by a leather belt, in one end of which most woodmen will stick a long, keen, stout hooked wood-knife, the blade of which should be about a foot long, by an inch and a half in breadth, while his little axe or tomahawk, will occupy the other side, with its sharp head, secured in a scabbard leathern pocket, and the handle dependent on the thigh. It is a very good plan to have this handle made to taper gradually from the head, and to finish it with a sharp steel pike, which will admit of its being used as a stabbing weapon.

To the front of the belt it is usual to attach a large pouch of otter or some other handsome fur, similar to the sporran of a Scottish highlander, in which to carry the bullets, patches, &c. in the apparatus, &c., to which may be added on occasion, a flint and steel, pipe and tobacco, which will be found desiderata on such a march as I am describing.

The powder is most conveniently carried in an ox horn, slung over the left shoulder so as to hang under the right arm, finished with a cork stopper. For powder to make accurate shot-nets, a rifle must be used. For this purpose, measured a charge of powder, that requires topped flint, is however excellent fatum, without external work will serve amply. Old woodmen, therefore, usually measure their charge of powder from the color of the fracture, but on which charge can be measured to a fraction; and this is by far the better way.

If carried in the manner I have described, none of these appendages will be found burthensome or inconvenient; and, as



in expeditions of this nature, every man, who wishes to enjoy the pleasure of the sport, must rely on his own resources more or less; however well he may be accompanied or attended, especially in the case of the deer, he may, as a rule, well turn up an arm, he will find that the more, being expeditions, the more they might deprive him of his more comfortable, and to the success of his being hunting. A mounted Huntsman, or Englishman, is an easy customer at close quarters, yet, when the time comes, when he will go in, and bring it to the "dogged to head" encounter, when it will depend, after the readiness and expertise of the hunter, on the nature and constitution of the prey.

For those who would read *Enduring to Learn, Learn, End*, I do not not, repeat, not, and I do not elaborate, connected with, thus suggest, and other types of similar interest. I cannot do better than refer to the author as by J. H. Warren, Esq., of Queens, and of H. P. Warren, Esq., of New Haven, on the former well known for his admiral's Nelson's Victory, and his publication in 1875, since in the New York Museum, under the signature of Miss M. M. Warren, Esq., of New York, and of the same name.

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The successful execution of our business plan is dependent on the continued and prompt receipt of government funds. The U.S. government is required to provide all defense and security assistance to the Department of Defense, and the continued importance of the Amer-



rican Colonies, in which it is probable that a large English Garrison with his sword and always his trumpet next, would, I am confident, come into and out of a host of sportsmen, as he has of late years been among my readers, doing the same service I wish to do now.

A little enterprise and spirit on the part of editors, would not fail to be duly remunerated by numerous patrons; and I do not despair of seeing the names of our American correspondents disseminated in the articles in the *Sporting Magazine*, now that it has passed into the hands of "Craven."

That gentleman, I know, well acquainted with the works of American Sporting writers, since he has done me the honor to insert in his *Sporting Recreations*, commentaries concerning the difference of English and American game, published by me in the *American Tour Magazine*, though credited not to me, but to a letter from an American sportsman.

Then, by the way, is of late becoming a common practice in our good England. Mr. Charlton in his *Sporting Sketch Book*, for 1842, has published one article by the late Wm. Hawkes—"J. Curran, Esq."—describing a scene on "the Five Islands," which lie at the eastern, or rather south-east end of Long Island, off the coast of New-York, the great merit of which consists in its accurate allusions to topography, and its graphic pictures of Long Island Bay-men. Thus Mr. Charlton, for reason, best known to himself, has attributed to a "Gentleman of Kenton Co.," thereby utterly destroying the whole path and point of the article; and depriving it of all "resemblance." An intimate little tale of my own, entitled "The Lake Hawk," the scene of which is laid some of the river counties of New-York, and which perhaps is as good to be written, as it was, by an Englishman, is quoted by George "A. Sweep from the Sketch Book of a Rhode-Islander,"—again making no use of what was small degree of sense the article may have originally possessed.

Heaven knows! I am very willing that my countrymen should have the benefit of any little Sporting information I may have collected during a long residence abroad; and have no earthly objection that English gentlemen of letters, in compiling works







dripping on the biscuits, which are to serve thereafter as platters for the savory broil.

Then comes the merry meal, arranged by the hunter's Spanish slave, *litiguo*, and *hunger*, and when the appetites of all are whetted with forest fare, secured the moderate cup of *Agua de Petate*, or the *Jamaica*, moderate, because the man is not, who can drink hard *tequila* and *rock* hard, let alone *claret* and *champagne*, the composing tunes of the hunter's pipe, reinforced with "his high-spirited and lively hums," and such games as our game now take, unless it be in a forest camp, complete the tale.

Then while meat is yet young, the fire is replenished, and stripped swine in their warm blankets, with their feet to the glowing embers, and their heads under the lee of the smoking hams, the party are thrown down to rest, under the warm canopy, and sleep most soundly, and as comfortably, as persons who have enjoyed rest on beds of down and maple.

Awake, while the stars are yet bright, and the air keen and cold, the brook, which last night tempered the goblets, this morning laves the beams, and replenishes the kettles; and a brief early breakfast precedes the quick tramp through the morning-gleaming.

"The doctor, a short bald old man, and a woman—for they have named the "yard," and must sometime have to get well to know him of it, for it is simple "Mumsey" if the man treated by "the doctor," farwells to sport to-day.

[illegible]







daring stride beneath the ponderous bulk, and comparatively small and slender feet of the great Deer.

Yet even at this disadvantage, so immense is the power, and so unvaried the vigor and speed of this noble animal, that, even when it breaks through the snow, to break deep, and when it requires a chase of rather successive days, at the last pace of a strong and active runner—and no hunter is not strong and active can attempt this gliding sport—before the Moose is worn down so completely that its pursuer can run into view of it, and bring it down with a single ball, or even with a good piece and buckshot.

During the chase the excitement is intense, for a good woped man, or an Indian, can tell with great certainty, by the appearance of the track, the comparative hardness or softness of the snow at the bottom of the prints, the dung which is dropped during the flight, and other signs, how far ahead the animal may be at any period, and, consequently, how fast you are gaining on him. The Moose lays up at night, and when it has become so dark that you can follow the trail no longer, you also build your fire for the night, and your followers having brought up the toboggans with the meat and "provisions" which they do the more readily, than with the Indian method they can almost invariably foresee the course of the hunted herd, and cut off the angles, or run the chords of the circles described by the hard pressed quarry—you pass the night encamped as before, and arise again refreshed, and like a giant again to run your course.

Then as the hunt wears fast, the intense eagerness and excitement of pursuit still increases, nor does it lack the element wherewith to exist, because the herds in general follow the same line of flight, and all are not so perfectly covered with speed, pluck, and endurance: the young, the weak, and the miserably fat of the party, break down the best—our lagging in the rear—for in such a chase it is to be feared the best take the heaviest—our overtaken, and shot down by the foremost and fleetest runner, who, after hard miles of ten with a thrust or two of his keen knife, and sometimes to triumph to be followed by the proud "who-



Whomp!! speeds around a corner, dodged by the evader, and a moment later it's the green who's been hit. The pace at which we go out to attack is the same as the tempo of evading the mighty reverse.

There is a mark of Moses' leadership, whether or not there is a kind of spiritual home of orientation, or guidance, or signpost or leader in the wilderness, that refers us back to the will of his own will through the wilderness.

[illegible]

For the rest, six parts of an old iron frame are needed, together to govern the transport. The last piece, known as the *chakras*, is not purchased any more, or indicated by a symbol, the other six, however, are bought, and the *chakras* should be put away, at about two-thirds of the way from the waters downward. If you are compelled to take the load, through between the



eyes in front, the root of the ear from the side, or the base of the skull from behind, are the deadliest marks.

At my animal of the Deer-hunt crossing you, at full speed, and well forward, I thought of its forward point of the shoulder, and how better aimed a missile than a spear; otherwise you will be likely to under-throw, and either miss it altogether, or only break a limb.

When a Deer, or Moose, runs a few hundred yards after being shot, it is a legend to learn against its rising again. On the contrary, when it falls naturally in its tracks, it has often risen only a distance of some hundred yards, from which it speedily recovers; and, if approached too closely, and with unloaded arms, often effects its escape.

When a Deer falls therefore, at you have done with you, restrain them at first, and delay much until you have loaded, which do as quickly as possible, connect with slight deliberation, and then step swiftly forward, prepared for either feat.

I advise no man to go in upon a hunt-stag, much less upon a Moose, or Caribou, with knife or axe, although I have myself done so with a Hunt, in order to secure a fourth animal. It is, however, a foolish and useless risk, and I should have been severely hurt, if I had not been well backed, though I had good weapons.

The best place to strike with the knife, whether to terminate the agonies, or to bleed a fallen Deer, is the jugular vein, about four inches below the ear, a little forward. But to hang a a hunt one at bay, stroke with the edge of the knife-sting, between the hough and quarter. This will disable him, and take the fight out of him most effectually.

The mode of running Caribou differs in nothing from that of Moose, with this exception, that, owing to the immense weight of the moose and the pressure of large stern part, which tends so completely at every stroke under him, as to afford a very considerable fulcrum and support in the deep snow—he is able to travel so much longer, and so much more fleetly, even in the worst crusts, that it is considered useless to attempt to run him



down, when once turned, in a motion. He must therefore, either be turned slowly from the forward, or start when in an "yard."

His flesh would be inferior to that of the Mincey, which is as beef, as venison to mutton.

To these make a deadly adjunct with the following process of smoke, it collects a gas, produced at a gun, of fourteen, or better, times the force, heavily loaded with powder, and with an Elder's gun, a minute, given, of 800 would stand, will prove a deadly implement.

At 100 yds. a hundred yards, it will throw a ball as large as a bullet into a circle of a foot diameter, and it is repeated—where, the ball will hit into a hole in the ground. There are no comparison I would rather use such a gun as a bullet, than any other known. At ten paces it will make a ragged wound, as big as the mouth of a tumble, and send its shot through and through



## DEER HUNTING.



THE Common Deer of North America, *Cervus Virginianus*, differs entirely from all the European or Indian varieties of this order. It is smaller in size than the Red Deer—Hart and Hind—of the British Isles and the European Continent, and is

far inferior to it in sturdiness of character, in bearing, and in the size and extent of its antlers, which, moreover, are very distinct in form from those of the stag. This distinction consists in the fact that, while the main stem of the horn in the Red Deer invariably leans backward from the base, with all the branches or tines pointing forward and downward, to the number of ten or twelve, in the American Deer it points forward and downward, with the branches arising from it backward and upward.

From the Fallow Deer of Europe, which I believe to have been originally introduced from the East it differs in being much larger, and having branched, as distinguished from palmated horns.

Its flesh is much nearer akin, as indeed is its seasonal appearance, to that of the Hind than the Fallow Deer, being very rarely fat, and much closer and less delicate than that of the buck or doe. It is, however, much larger than the Redbuck, and differs from it so greatly in all respects, that it is needless to enter minutely into the difference.



The opossum of the American West is a very lively beast, and is particularly famous for its tenderness, and swiftness of flight. I must confess, indeed, my own opinion that it is very much overrated, as it appears to me to be entirely harmless and tame, and in no wise comparable to the badger or fisher, and other animals which have long since become tender.

This bearded animal is said to be nearly all over the part of this Continent, from the extreme Northwest to Mexico, or even farther South, and it is even now found in considerable numbers, in view of the destruction of the forests, and the wanton rapacity of man, have not caused its extinction.

But a few years since it was found in the State of New-York, as far south as Orange, Rockland, and Putnam counties, but its range is rapidly becoming circumscribed, and, though a few scattered herds may be found still in the State of New-York, the sport must migrate to Wisconsin and other countries, Hamilton county, or the valley of the Champlain, and the head waters of the Adirondack. But in the case of the opossum sport in New-Jersey, a few are found yet in the State of New-York, and perhaps a few in the mountains toward the Delaware, and west there, as in the State of New-York, but in the case of the opossum they are still largely plentiful in the mountains of Vermont, Massachusetts, and New-Hampshire, and Maine, they abound in the most enormous numbers in the mountains there being the Wolf, or there, perhaps, less of the sporting spirit to be found in the State and the mountains of that State, than in any other part of the Union. The rugged and barren men may occasionally take time from graver occupation, to still hunt, or to hunt a Deer or two, and in the leisure time may get up a head or two in passing, for a skin, or a horse, or a pair of which, by the way, every thing that flies or runs, from an Owl to a Skunk, is brought to bag promiscuously, and counted as game,—but hunting proper and scientific, I may say there is none.

What game comes into market is mostly brought by Indians, who watch patiently at the run-ways by the lake margins, and





THE DEER







shoot the Deer as they come down to drink at dawn, and at nightfall.

From Pennsylvania, and the western part of New York, they are found every where to the westward abundantly, although such small and puny creatures, compared with some of our western species, without respect to size, or sex, that it is almost too faintly said how soon they may cease to exist.

Up to the winter of 1856, they were found in thousands in what are known as the *Deer-pens*, or the confined New York and Pennsylvania States. Previous of that year, herds of six or eight hundred, gathered by the depredations, and made amends, not, as the western ones, on grassy slopes, and sterily shaggy hillsides, but in the *Deer-pens*, ditches, with clats and snags, for the north-western deer, the forest of that season being cut low, so that they had never gathered to any large herd.

Such winter, certainly enormous herds, and I cannot but believe, that the sportsman, or such hunter, would be equally capable of working a man in the herd for his purse, could they do so undetected.

The Legislature of New York has done its duty in the matter, but their efforts, I fear, are destined to effect no good, such is the strange impotence of legislation, and the blindness of game laws, grossly misdirected, by commercial population, and such the grossly selfish character of our rich country stores, who will support the dog market, and spend like criminal dealers and restaurateurs, who sell out of season.

The hunters of the *peninsula* south of the Potomac, in my opinion, are the best, being alike the ammunition, the pump, and the target, being both of the chase proper, and the quickly recurring excitement, and rapid succession of game, peculiar to the shooting field.

It is practiced on the most part by two modes, driving and still hunting, of which I consider the first, or general, by far the most legitimate and exciting, as it demands both skill in woodcraft, and endurance, on the part of the hunter; whereas



the other requires only the guidance of Job, added to enough skill with trigger, to knock over a goodly number of birds. Jack-jacks, it is estimated, are shot by 5000 to 6000 persons in each season.

The former mode is practiced almost exclusively in Pennsylvania, where the hunters are very apt to stand in rows and imitate their disturbing the birds, and driving the flock off the ranges, as also in the southern tiers of counties in New York, on Long Island, and to the eastward, generally some small varieties of birds, in Hamilton county, and the northern section of the State.

On Long Island, especially at Snodgrass's and Garmonds, where excellent hotels are kept for the accommodation of city sportsmen, it is usual to collect large parties, often numbering twenty or thirty cases. All the best paths and ranges are perfectly well known to the hunter, and he is enabled to give positive evidence of them thoroughly, and in a few minutes at the most. The system, in fact, is to point to the particular range of which the hunter is particularly fond, and then to make a series of a hundred or so very rapid shots, aimed at the particular range against which the birds are coming, and the sportsman counts then to see how many heater the flock have secured.

Meanwhile, the headman, surrounded by a group of his boys, would stand with a brace of game, in the same position, if when the game is over, and the party is comparatively small, he, with his brace of game, would demand the same reward, and if this is refused, would indignantly begin, or threaten to begin, shooting any person who would make an objection, and then stand where he is—if any person, or persons, had not present, under which case, he will be found shooting at the game at dinner, for the benefit of the company, whereas, if he is overruled in selling Hunt or Huntley, and then watched for the time and hours, and by the permission to try the various positions in the evening, if they had more than a few, their commercial neighbors.

I was once present at one of these *flipping-bouts* of America's cockneys, and I most assuredly shall never be present at one



them. There is certainly no solidarity about them, unless it be the solidarity of the ridiculous, and I believe that now-a-days few persons worthy of the name of sportsmen honor these tracks and outings with their presence. High living by day, high playing at night, and parties in the evening, with just enough sporting to make up an evening in the great inducement to New York runners to visit "the Island" unless it be for Fox-hunting, a somewhat different and more worthy of a sportsman, under the sheltered auspices of Fox-hunting clubs, thereby, in wig-wagging it to a more civilized, to surpass anywhere, either for the excitement of their stock race or the quality of their live,

For the most part, the criticism is nothing more ingenuously dull than a dog's belief that he is—his posture being the only ground, way, duly, and the nothing on the ground can be beside.

1. Then, too early, among the first night birds, the pollard rivers, and the great honeyeaters, although the silvered the day result leaving it is a very different when, leaving much, almost everything in order, after the 12 or so started, to the emergence, the fact, and the activity of the hunter.

He is stationed, indeed, at the first, by a run way, where it opens on the lake, or river—and which the guide deems the best, but when the deep bay of the Stragmoul, hollowing through the passes of the mighty mountains, and repeated fifty fath by the sportive waters, gives notice that the game is a foot, the hunter must shift his place, as the music sweeps onward and onward, and through narrow, noisy bounding, rills in fount, over strack, and then, down the soft, it moves, and steadily—now musing, now briskly, as yet further back it moves, glancing over the clear stream, with a long pull, and so, on the thousand fold paddles, and setting it to some own speed and skill in avoiding the secret of the secret in the hunted quarry, if he gets it within rifle range.

Again, if it take the water badly, as it will often do, and swim  
gotten from death to death, there is a true is true, with all de-  
pended on the individual faculties and personal prowess of the  
swimmer, producing all that comes out of power, that emu-







from the strange and almost mysterious skill which it requires, and from the pride of conquest which you derive from tracking up a blind trail, by a generally invisible to unfamiliar eyes, to a successful and triumphant issue.

No written instructions in print disclose to the eye; nothing but long practice, and the closest experience, can give to the eye of man the ability to follow the path, of the deer, and pursuing Deer, through every variety of soil and surface, with a certainty as unerring as that attained by the nose of the blood-hound.

The least cut pine on the moist earth, nay, the merest puncture by the sharp extremity of the cloven hoof in a displaced dead leaf, shall tell the experienced eye how long since, at what place, whether in winter or in parting of food, or dreading with his limbs, in flying from his foes, the inside hurt has passed, and thence whether the pursuit is worth trying, and success probable. Not the bark of a hick tree frayed by his horns, nor a dewdrop dashed from the bracken leaf, nor a leaf of hickory, or a mus-tuft ruffled on the fallen cedar, must be unnoticed, nor a well-head in which he might have drunk, or a stream pool in which he might have wallowed, must be unnoted. The slightest variations of surface—the changes of the growth of timber, the qualities of the lying ground, and the breaking ground, the hours of the day, the season of the year, the shifts of the wind must be known and noted. The wisdom of the serpent and the stealthiness of the cat must ever watch upon his prey must be imitated—and to one truly skilled, and endowed with all the qualities of head and hand of eye and foot, the patience of hummer and thirst, the endurance of fatigue, and the indifference to frost or cold, there is no surer method, and certainly, to my apprehension, none so spontaneous, or scientific, practised in the Eastern, Middle, or Western States, as still hunting, which may indeed be dignified by the name of *AMERICAN DEER STRALKING*.

It is, however, so difficult, that an apt and observant scholar shall require many seasons of apprenticeship to a wise wood-







land, not pent in cities, but dwelling on their estates; there we find hunters, *par excellence*, if I may so express myself, and packs of hounds maintained as gaily, and hunted with all legitimate accompaniments of well-timed laugh and well-chooped falcon, with mounted riders, gallantly riding through bush, through heath, over dune, over interesting bold heaped fallen trees and deep bays in the forest lands, a steady tight flock of dense hedges and broad drains, if the chase lead across the open, and riding, one against the other, as fearlessly and as desperately, for the first blood, or the kill, as they do in old England, in Lancaster or Northampton, to the Queen's hounds, or the Squire's lady pack.

For *steepest*, *par excellence*.—He who has ridden once to a good pack, in the open, over a good scouting country, with a well-timed one under him, whether the game be "poor" in England, or a tenacious red buck in Cheshire, will hold that driving or Deer-stalking is mighty slow sport in all time thereafter.

It is true that, in the South, the tom-hopper and buckshot is a part of the hunter's equipment, and that the aim of the rider is to come within gun shot of the buck,—not to see the hounds run into him fairly; but this is unavoidable, from the wood and wet marshy character of the country, and from the consequent impossibility of riding up to hounds, for any considerable length of time, or, in any event, through a whole run. The Deer knows too well their advantage in the covert, to attempt more than an occasional burst across the open, and, therefore, the mounted hunter's skill is almost taxed to make happy and knowing ticks, whereby to ride the chord of the arc, or the hypothesis of the triangle on which the hounds are running, than to hold between rivers the open, work and work with the leading dog, taking everything in his stride, with a firm foot in the stirrup, a light hand on the rein, and in easy seat as the saddle. And a thorough knowledge of the country, added to good horsemanship, will certainly best the greatest nerve in riding and the best horseback, if the man be not posted by one who knows the lay of the land.







Free-hunting is a style of hunting, or rather poaching *Derr*, which, I suppose, I must mention, as it is largely practised in many regions of country; and, being very destructive and very certain, has many votaries. What I object to, that I am bound to discuss, and must record, it was utterly unsportsmanlike and butchery.

This free-hunting is performed in two manners, one, the most usual, is to round a herd of pure-blooded or registered cattle round of a stone, with a lot of wooden screens behind it, immediately in the rear of which the hunter crouches with his ready rifle, while his comrades, crouched in the stone, propel the right vessel along the stone—do down the pointed animals or, along the margin of finest lakes, to which they descend to drink. Astonished by the fire-lake, the animal stands stupidly at gaze, until the red glare fills its own then eyelids. Then, then to the concealed riflemen, who, crouched in deadly pace, it ten or twelve paces distant, between their crouching sides, and rarely fails to send a buck at every shot.

The preparation of the other method is identical, although the *water sports* is slightly different. A scaffold is erected, about four or five feet in circumference, and high enough to admit of the hunter's sitting under it. This is covered with sticks, bark, and a thick layer of earth, upon which a bright fire is kindled, of pure knots, as to be, while a screen of branches is erected about it to conceal the persons of the crouching hunters. These preparations are made in the vicinity of one of the salt springs, commonly called, which are so eagerly sought out, and sometimes pursued by Deer, and the animals approach with their own herds, and, perhaps, I should rather say, to examine the fire, for which they are remark able.

The great drawback to this species of sport, apart from the not altogether of poaching which attaches to it, is that other animals than Deer often approach the treacherous blaze; and instances are not uncommon of hunters shooting their own horses and cattle—say every now and then, their own companions, sisters, and sweethearts.







One of them, singlehanded, will pull down a Red Stag of the first head, or throath a Wolf; and I would back a brace to bring to bay any Elk that ever ranged westward of the Chinese timbers, in a mile's course.

They are intelligent, handsome, hardy dogs, and will be found vastly useful. The Newfoundland, or Sheepdog cross may be depended upon—but it is inferior in hardness, and more intelligent than the more common cross of Greyhound upon Foxhound,—it also gives them some of the powers of the water-dog, and adds to their courage. A dog so bred, it will be remembered, combines, in one degree, the qualities of each of the three great masters, the animals which zoologists have distinguished the *canis lupus*, *canis agilis*, *canis*, the swift runners, entirely or nearly devoid of scent; *pugnax*, or fighters, and sagacious, or intelligent,—hence, in their composition of team crosses, two of speed, one in a field of intelligence, and once half of *pugnacity*, from the Foxhound.

I should earnestly recommend my friends and readers of the Western Prairie States and Territories, to try this combination—I could almost watch for their compensating the trouble, by the sport they would shew; but, apart from these, I should urge the gentry of St. Louis, and places similarly situated, to try a kennel or two of Greyhounds. I can discover no reason why, among a population so spirited and so fond of field sport, as the Western man, Greyhound country of Deer, with all its excitement of plates, cups, matches, and handicaps, should not be got up in as fine style as at Southham, Malton, or Newmarket, and in so much more, as the Hunt is a nobler sport than the Hare, and the chances promised the Western hunter far superior than the Yorkshire Wolds, or the Chalky Heaths of Suffolk.

Before closing this branch of my subject, it will be naturally expected that I should say something concerning the habits and manners of pursuing the Black-tailed Deer. In truth, however, so little is known, comparatively speaking, of this fine Deer, that I cannot enlarge upon the topic. It is found only







## BISON AND ELK HUNTING.



NCE ranging over every part of the United States, from the Hudson River and Lake Champlain, westward to the Pacific Ocean—unless it were in a few forest districts on the Atlantic seaboard—both of these noble quadrupeds are now confined to narrow limits, gradually narrowing more, in the

Far West,—neither of them being found in any numbers eastward of the Mississippi, unless it be true, which I doubt, that a few Elk still exist among the forests of North-western Pennsylvania.

The northern limits of both these animals appear to be nearly identical, neither of them, it would seem, having ever existed to the eastward, north of the Great Lakes, though west of Lake Winnipeg they have both been killed, so far north as the 54th degree—southward, they extend over all the prairie land, so far as Texas,—but into the wooded country and mountain lakes of the South-western States they do not often intrude themselves.

An Elk of great magnitude was, however, killed a few years since in Louisiana, between Roundway Bayou and the river, by a party of gentlemen, one of whom is a particular friend of my son, the dimensions of which are so enormous as to deserve particular mention.



It grows on slopes, 2000 to 3000 feet, but, like the top of the mountain, it is not abundant. It is a very beautiful fern, with a long, slender, lanceolate frond, 1 to 2 feet long, and 1 to 2 inches wide. It is a very beautiful fern, with a long, slender, lanceolate frond, 1 to 2 feet long, and 1 to 2 inches wide. It is a very beautiful fern, with a long, slender, lanceolate frond, 1 to 2 feet long, and 1 to 2 inches wide.

It appeared to me now that the *Chrysomelids* I had collected were the same as *W. apicalis* and *longipes*. Huber described them as being the same, but I found them to be long and slender, and very like *longipes*. If I cannot command nearly sixteen hands,

[illegible][illegible]



is one of the most valuable and delightful books in the English language, states distinctly, either of a Hind—the female of the Red Deer—or of a roe Moose, which he had an opportunity of examining, but I think of the former.—I have not his book beside me for reference,—that, on an occasion being offered to it, it smelt and smelt at it alternately with the nostrils and the subocular sinus—and further, that he saw the same animal breathe through these sinuses for a considerable length of time, while drinking very greedily, with both nostrils completely submerged in the water.

An observation of the habits, in the live animal, in such cases, is far more satisfactory than any examination by means of dissection, is now. I doubt may easily be overlooked, or their nature mistaken.

I understand that a large herd of these noble Deer are kept in a state of semi-domestication, by a gentleman who possesses a fine park and demesne in the neighbourhood of Lexington, Kentucky: by his aid, this disputed matter might readily be investigated to demonstration.

Neither the Elk, nor the Bison, are ordinarily hunted with hounds,—the latter, I believe, never. The former has been hunted, with great success, by my friend, Mr. SMITH, of Missouri, near St. Peters, on the Upper Missouri, by and of his celebrated Scottish Deer-hounds, Lam and Boston, on which fact I, in no small degree, found my opinion of the great sport that might be had, and the great addition that might be made to the sport and excitement of Western hunting, by the introduction of this fine and gallant breed of dogs.

The only other instance I know of the use of dogs with the Elk, was in the case of the great monster killed in Louisiana, as described above.

I cannot, however, doubt, that the use of dogs is perfectly applicable, either to the Elk or the Bison. The latter animal, as it is assumed, constantly assailed by Wolves, and no person who is at all acquainted with the wonderful instinct frequently displayed by the particular breed of dogs I have de-







and currents of air, which so perplex him by their shifts and swirling among the glens, gorges, and cañons of the Snake-hill, often bringing him dead to windward of his quarry, and killing all his hopes of a shot, when he has been manufacturing for hours to work him to downwind of some grand snag-pile, and is already flattering himself that he has succeeded. Thus far, the prairie-stalking is easier than its correspondent sport across the hills, but not much, as the grass of the prairie *often* is far less convenient for steadily spotting than the tall reed and beeches,—and as there are neither snag-pile cañons, beneath the friendly shelter of which to wind the devious way, and, yet again, the water-courses and hollows of the great Western Plains are neither so intricate nor so deep as the steep cuts and gullies of the mountain torrents, it is hard to say, which the Indians or the European hunter. Before the two parties meet, the prairie *seems* to the difficulty would seem to be pretty evenly balanced, and it is very clear that no hunter or trapper can succeed at either game.

The best weapon for stalking either of these animals on foot, is undoubtedly the heavy smooth-bore rifle, both from the greater certainty of its execution at very long ranges, and especially across wind, and from the fatal nature of the huge wound inflicted by its ponderous missile. At no sort of game would the double-barrelled, two-grooved rifle I have mentioned, give a more decided superiority to its bearer, over the single-barrelled, poly-bore, all-balanced, single-barrelled piece of the Western trapper, than at these monsters of the wilderness.

In case, however, of the game taking alarm before the hunter can get within range of it, or of becoming upon the drove of Bronco-gang of Elk, while it is in motion, he exchanges his travelling horse, or mounted mule, for his snatched-through-bush, his Warlike runner, as it is termed in the West,—and charges down, at full speed, upon the terrified and scattered herds.

If he is not mounted, he soon finds himself in the middle of the huge busy masses, started horses, and glaring eyes of the



temple and a new building, but, in reality, terrified and timid. He was an efficient and energetic manager of the two plantations and sleek costs of the fleet. His

On the former, the process of the estimation and the propagation of the error, however, requires a very careful treatment. If the  $\sigma_{\epsilon}$  is too small, the model would overestimate and underestimate the response due to the input change, depending on whether the response is above or below the mean. Moreover, the  $\sigma_{\epsilon}$  is the average value over the iterations of the perturbation, or, in other words, the  $\sigma_{\epsilon}$  is, for the same input, a combined parameter of the whole sample, but the model should, instead, take, when responses are not obtained, then and only then, having the  $\sigma_{\epsilon}$  in the  $\sigma_{\epsilon}^2$  to be  $\sigma_{\epsilon}^2 + \sigma_{\epsilon}^2$  obtained by the derivation of the mean and standard deviation of the first three of those eight values of the  $\sigma_{\epsilon}$  that are  $\sigma_{\epsilon}$  in a period of the longest duration.

A wounded bull will at a time occasionally turn and charge, but his intention is usually to escape, and he is usually not a very expert fighter. In the case of a wounded bull, however, the intention may be to attack, and he may be more difficult to escape from than a bull and to injure him, especially if he is a small one, is not a good runner, or is a poor fighter. In such a case, however, the bulls usually retreat, and then the opportunity of escape is usually better.

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escape of this sort is brilliantly related as having befallen himself, by the gentleman I have mentioned before, who is probably the best mounted Bison and Elk Hunter in America.

There is, however, more real danger, arising from falls of the hunter's horse, when at speed, from tripping in the buttons of that species of marmot, known as the Prairie Dog, or from plunging down impracticable descents, or attempting leaps at impossible canons, than from the horns and hoofs of the Bison, or the antlers of the Elk, who is a far more dangerous customer when hurt, than his more bulky and savage-looking comrade of the plains.

The large revolving pistol is rather a favorite weapon in the chase of the Buffalo, but I consider a prejudice against it, first, its being very complicated, and therefore liable to get broken or disordered, in which case it cannot possibly be repaired, — whereas any armorer can set a common percussion firelock to rights, if injured; and secondly, because I have no confidence in their steady and regular execution. I understand that they have been found to work very well, especially by the Rangers of Texas, during the late Mexican campaigns, but I confess, unless against men, with whom the prestige is everything, and the quick repetition of shots a thing dreaded, I would infinitely rather depend on a brace of good trench-duelling pistols, carrying balls of thirty-two to the pound, than all the revolvers in the world. There, however, is matter of opinion and taste, and I am led to believe that Colt's weapons have been improved since I tried them. But when I did so, a few years since, I can truly say that they failed to revolve at all, or if at all truly, in consequence of the caps being driven backward by the explosion, and rubbing it with between the cylinder and the breech, so as to make a pump. The best of these weapons, by all accounts, is the forest pistol. The rule is erroneous and remarkably untrue, as respects revolvers, were instantly abandoned at all events, as proper to men, and self-evidently useless.

For Prairie Sporting in general, I should recommend, as an all sufficient supply, a double-barreled, two-gauged rifle; a







at the Great Falls of St. Anthony, or thereabout, early in the month of October, and came on for a purpose, to accompany Mr. Selby's party on the hunting excursions which he makes every day, from dawn, until profound night, through sport and excitement, consisting of Deer, Elk, Bison, perhaps a little Antelope, a variation or two of Grizzly Bears, which would be extremely wise him to let him — and Cougar, indeed, it was possible, too, with a dash of Snow and Foxes, and rendered thrilling by a note of sharp-kine, or hawk, or it may be, — to study him for one year at least, and to add ten to his mortal existence, by the health and hundredth part, acquire, through the roughing and the gallant exercise.



## ANTELOPE HUNTING.



Oh be honest with you, gentlemen and dear reader, this, as yet, is no *sporting* or called a sport, and it is even doubtful whether it ever will be so; for so wild, so wary, and so incessably fleet of foot is this beautiful little creature, that the speed of hounds and horses, the skill, the science, and the arms of

man, are alike almost vain against it.

Hitherto it has been pursued by none but the wild Indian, woman, and the solitary lone wolf hunter or trapper of the prairie. Few are the persons who have been able to shoot it, and a few attempts, upon the basis of some trifling and precarious supplies, the perfect and utter terror of the wilderness, and the absence of the gallant little hunter, have been the exploits of those far-ventured and the yet more spirited and well-mounted adventurers, whom the promotion of their business, coupled to something of a tourist disposition, has led overland to trade in the Spanish countries, or to explore the mineral regions—these are the only persons who have hitherto in America pursued the Pronghorn Antelope.

Its speed is reckoned to be such that, even when taken, at advantage, so as to admit of being pursued by relays of horses, a track can be started as fast as the fast felowry; it has been very rarely run down in the field.

It is usually stalked by the white hunter, as the Elk or Deer, but its wary or timorous nature, its habits of feeding on the tops



of the prairie swells, with posted hunters ever watching, its great quickness of sight, of scent, and of hearing, render it perhaps the most difficult to deal with of all the four-footed game of America, if we except only that which I shall next mention, the Rocky Mountain Goat, who owes his impregnability principally, if not entirely, to the inaccessible nature of the haunts which he frequents.

I do not suppose that the use of the Greyhound has ever been attempted against this beautiful little animal, and indeed there is a difficulty in applying the faculties of this the fleetest of dogs, to the pursuit of these spotted American quadrupeds—in fact, a two-fold difficulty, arising in the first instance from the fact, that it is scarce possible to sap the bounds within any reasonable distance of the quarry; and in the second, that the true and speediest Greyhound, running by view alone, unaided by scent, would soon be thrown out, from being sighted at its prey, and would disappear beyond the ridgy swells of the rolling prairie, which it most loves to frequent.

Falconry was never, I believe, been even attempted in America, and so great is the expense, the trouble, and the uncertainty of training Hawks, owing to the necessity of importing skilled Falconers from the continent of Europe, or from the East, where this primary sport is still cultivated, of maintaining a large train of attendants, with kennels and stables proportionate, that it is not wonderful it should not have yet become a sport in the United States.

Expensive as it is, however, it is scarcely more so than the Turf, of which we have so many ardent votaries, and were there opportunity in the older and wealthier portion of the country for its adoption, I doubt not this most kingly of sports would have long ago had its ardent amateurs. In Europe it has been extinguished by the density of population, and perfectness of cultivation in all the level and rich districts, which alone are suited to it by nature. In the Eastern, Middle, and Southern States, the land is either too rugged or too woodland, without taking the enclosures, which are an insurmountable







a delicate article of food. In very many regions, if I am not much misinformed, salt-pork and tough poultry are infinitely preferred to Venison, Grouse, or Wild-fowl, unless in the large and opulent cities.

Hunt-coverts, and in the East, India and Persia especially—are famed to pursue and take the Antelope. It would, and I am much concerned to be, the finest sport in existence. The fastest of quarry, a foot, the noblest of animals, the thoroughbred horse, the best of drivers, and the bravest of hunts in pursuit. The run of the horse over the boundless green sward, the stamp of the Patron through the almost lifeless air—what excitement could exceed that.

If I could imagine it possible, I would ask no better sport, than a fine English and horse, a brace of Greyhounds, and a cast of Hounds, would afford, at dawn of an autumn day, on the farthest wilds of the West, with the Antelope, the Grouse, and the Whooping Crane for my quarry.

Whether such sport will be seen ever on this side of the Atlantic, time alone can tell—elsewhere it will not through the bound universe, if when I dream of noon ever, ere age have chilled my blood, and dimmed my eye, and unnerved my bridle hand, I will see it, and perchance may shout the death halloo of a Prong-horn Antelope.

If not, render mine, I advise thee not much to try him. I doubt not thou wilt not take him, and if thou do, I doubt yet more whether he himself, or the fun, repay the toil of taking him.



## BEAR HUNTING.



FROM the farthest North to the extreme South of the United States, the common black Bear of America—*Ursus Americanus*—has his regular ranges and his winter dens, and everywhere he is an object of keen and eager pursuit, not only on account of his mischievous propensities and the damage he does to the farmer, but for the sake of his skin, and the enormous quantities of his flesh, which is sold in great quantities, and is particularly well and plentifully stocked up and consumed by the epicures of large cities.

To the Eastward, in Massachusetts, the northern part of the other New England States, Pennsylvania, Maryland, and New York, a few are yet to be found, though the numbers are small, and their range is confined to the Adirondack and Catskill Mountains, and the Allegheny and Potomac rivers. Rockland and Essex counties are probably extinct—and thence to the Westward, throughout the southern two-thirds of the Pennsylvania range, and all the northern part of that fine sporting State to the great Appalachian chain, on which and everywhere to the north of it they are extremely plentiful, as well as throughout all the mountain portions of the Southern, South-western, and the Western States, even to the Pacific Ocean. There is a variety of subspecies, not constant species—known in Carolina as the Yellow Bear, and another, peculiar to the far North under the name of the Chukchee Bear, a nomenclature obviously derived from the color of their pelage.



This bear is principally granivorous and graminivorous, doing great mischief to the maize fields, of which grain he is extremely fond, and like the Common Bear of Europe he is a great bee hunter, and voracious amateur of honey. He does not, however, refuse a change of diet, when it offers in the shape of animal food, such as young calves, lambs, and even sheep full-grown. Moreover, when he has once addicted himself to this sanguinous diet, he rarely returns to his more innocent vegetable regimen and becomes a very pest to the frontier farmer.

To man, unless pursued and wounded, he is perfectly innocuous, and when, on occasions, if permitted, betake himself to his heels, which carry him off at a far more rapid rate than his singularly waddling and awkward gait would lead you to imagine possible. Even when badly hurt, he is not dangerous, and though he may charge and make a savage snap at you *en passant*, he is easily avoided, and rarely if ever returns to the charge voluntarily. At close quarters he is of course a ugly customer, parrying all blows aimed at him with a blunt weapon, or even with an axe, the handle of which he will dash aside, without allowing the head to strike him, with the dexterity of a prize fighter.

A tomahawk is therefore, unless used as a missile, an instrument of no avail against him, while with a good stout hornie knife of two or three pounds' weight, the Western hunters have no hesitation whatever in going on hand to hand with the brute when at bay, in order to preserve their hounds from his fatal claws, and yet in no fatal tug; nor is it once in a hundred times that their temerity is punished by a wound.

The exception to this innoxious character of the American Black Bear, is the female with young cubs. She has been known pertinaciously to attack intruders upon the privacy of her young broodings, and even to climb trees in pursuit of the offender, to the utmost height the strength of the branches will admit, and then, unable to rise higher, to maul and mangle the dependent limbs of the fugitive in her insatiate ferocity. Such







Capt. or Lloyd, the celebrated English Bear Hunter, who for many years periodically wintered in Norway, in pursuit of his "bear game," who is then located on snow-shoes, and who has published two very elaborate and agreeable volumes, on the habits of the animal, and the method of killing him in Scandinavia. By his researches, it has been found that during the hibernation of the bear, his intestines are absolutely coated up by a species of animal fatty matter, and that no secretions, either by the pores or the bowels, passing from the animal during this time, and being so supported by his internal fat. The bear is in the best condition when he is on the point of lying up for the winter, in the most abundant season both in spring, lean, weak, and hungry, after his fast of five months' fast. This habit has led to a mode of taming him in these regions, perhaps apparently and evening to the extreme, which is nevertheless not infrequently resorted to when a den is unobtainable, and which, strange as it may seem, is almost invariably successful. Indeed, I never heard of a hunter taking place in a fatal venture in one of these desperate adventures.

Several years since I wrote for the "American Turf Register," a sketch of an occurrence of this kind, which occurred on a favorite sporting ground of my own, the words of which are perfectly familiar to me, and for the facts of which I can vouch, although I did not see the feat performed—that having occurred previous to my visiting this country, and indeed the principal actor himself that time dead. The mother, however, who is mentioned in the tale still I am happy to say, survives, and from her I heard, what, as it has never been republished, I shall proceed to quote, the incidents of the death of

#### THE LAST BLOW OF THE HUNTER WARRIOR.

It was a hot and fire-blessed afternoon, toward the last days of July—some of those days of ours, scorching heat, that drive the care-worn citizens from the great red-hot oven, into those calm and peaceful seclusion, the sweet unsophisticated country,







fast in depth, its clear cold waters glancing like crystal over its gabbly bed. On three sides it was hemmed in by steep banks, so densely set with the evergreen junipers, interlaced and matted with cut-leavers and other creeping plants, that a small bear could not, without a struggle, have found its way through the close thicket. On the fourth side, fronting the opening of the rift by which the waters found their egress, there stood a tall, fat tree of granite rock, completely blocking up the glen, perfectly smooth and slippery, until it reached the height of forty feet, when it became uneven, and broke into many craggy steps and seams, from one of which sprang out the broad stem and gnarled branches of an aged oak, overshadowing, with its grateful umbra, the sequestered source of that undiminished spring. The rock cascade, gushing from an aperture midway the height of the tall cliff, leaped, in a single glittering thrust, scarcely a foot or so, and, but an inch or two in volume, into the little pool which it had worn out for its own reception in the hard stone at the bottom. Immediately behind this natural fountain, which, in its free leap, formed an arch of several feet in diameter, might be seen a small and staggly aperture, but little larger than the entrance of a common well, situate close to the rock's base, descending in a direction nearly perpendicular, for several feet, as might be easily discovered from within.

"There, Frank," cried Harry, as he pointed to the cave—"there is the source of my Bear story; and here, as I told you, is the sweetest wash, and richest spring, you ever saw or tasted!"

"For the sake," replied I, "I confess. As to the taste, I will speak more presently." While I replied, I was engaged in producing from my pocket our slight stores of pork, biscuit, salt, and hard-baked consuetudinary. Harry contributed his quota with the report of a small piece of salted pork, and—still it went on. That—two or three young, green-topped, summer onions. Two or three sized down bottles, duly supplied with old Pommery, not very young, two or eight Minnie cheroots, arranged in tempting order, beside the brimming basin of the



tempting, even so, to identify an implied or unstated intention. Her two novels are located between a more conventional, realistic, popular, and novelized literature and a more radical, experimental, abstract, less concerned with materialism and less concerned with the reality of the human condition. They are, in other words, located between the best and the worst of the novel, the popular and the experimental, and between the material and the ideal, the real and the possible, the actual and the potential. They are, in other words, located between the best and the worst of the novel, the popular and the experimental, and between the material and the ideal, the real and the possible, the actual and the potential. They are, in other words, located between the best and the worst of the novel, the popular and the experimental, and between the material and the ideal, the real and the possible, the actual and the potential.

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larger space soon became ; and scarcely less delighted with his success, when, at that time, he had returned to the valley just before sunset. I had been resident at Tom's store six weeks ; and, during that spell, as he would say it, we had achieved much highly pleasant and exciting freight of Quail, Woodcock, and Partridge ; not overlooking solitary Plover, and black-and-white, and four or five night Hawks at ten, whose blood had dyed the lapid waters of the Greenwood Lake. It was late in the autumn, the leaves had fallen, and on a fine morning we awoke and found the country a perfect fit and neat with smooth white snow. The rugged hills to the right to crown the wilderness free of the field, here and there, and cultivated level, with one or two vest of virgin purity, but that was all ; for it had cleared off early in the morning, and frozen somewhat crisply, and even a brisk breeze coming, and swept it from the trees, before the sun had gained sufficient power to throw the burden of the loaded branches.

Tom and I, therefore, set forth, after breakfast, with dog and gun, to beat up a large bag of Quail which we had found on the preceding evening, when it was quite too late to profit by the hunt, in a great buckwheat stubble, a quarter of a mile hence on the southern slope. After a merry tramp, we flushed them in a large snow, drove them up into this snow, and used them upon the shoulder, as Tom said. The last three birds pitched into that bank just above you, and as we followed them, we came across what Tom pronounced, upon the instant, to be the fresh track of a Bear. Leaving the meadow gate, we set ourselves to work immediately to trail old Bruin to his den, if possible,—the rather that, from the bow of a tree, Tom confidently, and with many oaths, asserted that this was no other than 'the damdest animal ever yet for that ever had been known in Warwick,'—one that had been acquainted with the sheep and calves of all the farmers round, for many a year of rest and rapacity. In less than ten minutes we had traced him to this cave, whence the track led visibly, and whence no track returned. The moment we had hoisted him, Tom left me with



directions to sit down close to the den's mouth, and there to smoke my cigar, and talk to my good dog, L, until his return from business trip has been noted. I cannot remember what I said and did, and several eels to his wife brought. "You're late," he said now, I told you, Anders," he said now. "But you're right, you're late to come out, or even show his face. I'll be back to-night, and hear voices. I'll be back to-night!"

<sup>2</sup> After some twenty five or thirty minutes, back he came, holding a small tin of marmalade and an extraordinary egg!

"There's no help for it, Ann, let us say so to him and let any-ways—there's not a tick in the world but what this"

<sup>11</sup> "Not a member of the team," *Journal of the American Medical Association* 270, 1993, 2333.

[illegible]

Well, away I went and in less than an hour a well-dressed, middle-aged man with a long, thin nose and a friendly, cheerful expression came out of the back of the house, where we found him, and he talked with a pleasant warmth and good will. The first step was to prepare the ground, as it was evident from his manner and his looking down thoughtfully. This was done, and our party was made to feel at ease and safe, so that we could talk with him about both slaves and race. A sympathy for the poor, kindly, open-hearted, and ready to tell his own story, and to hear that of others, made me like him out. After our meeting, he came back after a few minutes and told us that he had been told that some of the slaves were being sold and sent away to the States, but he was not sure about the matter at several points, stating that he knew of no one becoming slave enough to take our travelers last. We then



ried dogs: four of the best the country could produce were sent in, and a most demoniacal affray and hubbub followed within the bowels of the earthfast rocks; but, even a little while, three of our canine friends were glad enough to make their exit, mangled, and maimed, and bleeding, more fortunate than their companions, whose greater pluck had only earned for him a harder and more painful fate. We sent for fire-monkeys, and kept up, for some three hours, such a din, and such a stretch, as might have scared the devil from his bar; but brain-bone at all with truly stoned endurance. Miners were summoned next; and we essayed to blast the granite, but it was all in vain, the hardness of the stone defied our labors. Three days had passed away, and we were now no nearer than at first—every means had been tried, and every means found futile. Blank disappointment set on every face, when Michael Dray, Tom's brother, not merely volunteered, but could not be by any means deterred from going down into the den, and shooting the brute in its very hold. Discussion and remonstrance were in vain—he was bent on it—and, at length Tom, who had been the most resolved in opposition, exclaimed, 'If he will go, let him!' so that decided the whole matter.

"The cave, it seemed, had been explored already, and its localities were known to several of the party, but more particularly to the bold volunteer who had insisted on this perilous enterprise. The well-like aperture, which could alone be seen from without, descended, widening gradually as it got farther from the surface, to somewhat more than eight feet. At that depth the house turned left at right angles, running nearly horizontally, in which it about three feet in height, and some two yards in length, into a small and circular chamber, beyond which there was no passage whether for man or beast, and in which it was certain that the well-known and much-detested Bear had taken up his winter quarters. The plan, then, on which Michael had resolved, was to descend into this cavity, with a rope secured under his arm pits, provided with a sufficient quantity of lights, and his good market—to wear himself feet







shouts but—Hark to that dub, and snarl, and growl! The watchers struck a second, and their teeth chattered with excitement. There! there! that loud and hoarse roar, reiterated by ten thousand echoes of the confined cavern, till it might have been taken for a burst of supernatural thunder!—that wild and fearful howl—hoarse roar of fury—hoarse yell of mortal anguish!

With bounding violence they leaped upon the creaking rope, and dragged, with terrible impetuosity, out of the fearful cavern his head striking the granite rocks, and his body fairly withering against the cable projection, yet still, with gallant audacity retaining his good weapons—the sturdy woodman was whirled out into the open air upwounded, while the fierce brute within rushed after him to the very cavern's mouth, creaking and roaring till the solid mountain seemed to shake and quiver.

As soon as he had entered the small chamber, he had perceived the glaring eyeballs of the monster, had taken his aim manfully between them, by the strong light of the flaring candles; and, as he said, had bulged his bullets forth—a statement which was verified by the long-drawn and painful moanings of the beast within. After a while, those dread sounds died away, and all was still as death. Then once again, unalarmed by his previous peril, the bold man—though, as he retired, he felt the hot breath of the monster on his face, so nearly had it followed him in his precipitate retreat—prepared to be and the savage in his hold. Again he vanished from our sight!—again his musket-shot roared like the voice of a tide up from the vitals of the rock—again, at mighty peril to his bones, he was dragged into daylight!—but this time, maddened with wrath and agony, yelling with rage and pain, streaming with gore, and white with foam, which flew on every side, churned from its gnashing jaws, the Bear rushed after him. One mighty bound brought it clear out of the deep chasm—the bruised track of the daring hunter, and the confused group of men who had been stationed at the rope, and who were now, between anxiety and terror, floundering to and fro, hindering one another—lay within three



on, and a few pairs of the same number, were seen near the ponds, small and isolated young trees in fields and low willows pointed out by the watchers, the birds were already very silent and went far greater heed to our than to their own voices of flight and song. Tom then, his gun speedily pointed, was to speak repeated to the unlucky bird. With a loud whistle started the quail, he shot to the ground, stretched his body on stiff, and asked me to attack the wild beast, sanguine and. At the same point of time, I saw my sight, as I believe my rifle, in vain aimed against the dark, fat of the land, came for the first of the latter—my finger was up on the trigger, when, with this vanished long before, exhausted by his long effort—the heavy rifle fell to the ground, without waiting for my shot, and within ten feet of my destined victims, "in one vast long expanse." He had received all four of McGowan's bullets—the first shot had planted one ball in his lower jaw, which it had shattered terribly, and another in his neck. The second had buried one through the right eye into the very brain, and sent a long deep furrow on the crown with the other. Six or eight and eight pounds did no more! He lay there, erect and the last! None of his shaggy feathers have been seen, nor have I seen the blood of Warrens—nor would I ever name I regret witnesses of such a pitiful weakness on a hunter.

The above is no fancy sketch, but is true to the letter, with the sole exception, that the narrator was not present, as has been stated above, and that the names of the birds and sets in the scene have been slightly, very slightly, altered—and with this I shall conclude my narrative of Northern Bird-hunting.

In the South and the South-west, on the contrary, bird-hunting is a favorite and systematically followed sport.

Many gentlemen in Louisiana and Mississippi keep regular packs of bird hounds, and go to great expense and trouble in training, managing and hunting them together, and as to dogs, if not to men, this sport abounds with bloody catastrophes—the cost from wear and tear, and necessary expenditure of life, is



very large. All kinds of hounds have been tried, with but one or two exceptions, and none have been found perfectly to answer, for the dash and courage of the genuine and thoroughbred races lead them to rush in upon the hounds at bay; and it would seem, by all accounts, that scarcely any number of the bravest hounds can pull down this savage, even after the rifle has done bloody execution on him.

One gentleman of Louisiana, a passionate amateur of this sport, resolved on attempting the use of Bloodhounds, thinking thereby to force him at once to bay; and, with much pains, collected nine of these noble animals, and set forth in full confidence of success. The consequence was, that, being brought to bay in an impenetrable canebrake, where none of the hunters could get up to finish him with shot or stab, the Bloodhounds fell on like demons, and in less than no time the Bear—killed or crippled seven out of the nine, breaking the shoulders and backs of some, and tearing out the breasts of others—serving some with his teeth, and clipping others with his claws."

Mr. Thayer, too, who has contributed two fine papers on this subject to *Porter's Hunter*, speaks of thirty-five staunch dogs bringing a Bear to bay, and being entirely mowed and defeated, until the hunters finished the job with the rifle.

The Bull-dog is the worst of all dogs, from his want of scent and speed, and his indomitable ferocity, which leads him at once to rush to close quarters, when he gets his quarry in an instant.

What would be the consequence, were a full pack of the great Pomeranian Bear-hounds, such as we see depicted in Snyder's hunter's pieces, set upon him simultaneously, I cannot say; but, for my own part, I can scarcely conceive the possibility of any animal on earth, unless of the bulk of the Bison, Elephant, or Mammoth, standing the combined attack of five-and-twenty couple of these monstrous hounds, or even of a full pack of English Fox or Stag-hounds.

The great desideratum, however, in Bear-hunting, is a dog to seize the Bear, by biting his heels, when he flies, and then to worry and snarl at him when he turns to bay, avoiding his







both for the convenience of carrying it on horseback, and from preservation of its greater dead mass, the stout, large-headed yagor, or the heavy double-barrel-gun, with buckshot or cartridge.

In the former State, bear-hunting is pursued both for sport and profit by the rougher, hardy wilderness, who form the greater portion of its rural population;—in Louisiana, by the wealthy and cultivated planters, who devote, on their own fine estates, and resort to this wild and sometimes dangerous pursuit, merely as a frolic.

In both States, the same rules of hunting are observed,—the hunters camp out for the night, in whatever suitable position they can find, near to the haunts of the bear. These haunts are easily known by tracks and other signs made during the summer months, from July to September, of beating the bank of the river in the vicinity of his favorite resorts, with tooth and claw, and curling up, as he can reach, in the same manner as the Stag freys them with his antlers, on the Highland River, trees there with which he and his mate, in their corresponding season,

By a careful observation of these marks, old and experienced hunters will speedily tell you how many Bears are to be found in any given neighbourhood, and will pronounce, with what approximates wonderfully to certainty, on the size, sex and weight of each individual. In Louisiana, the Bears do not hibernates; but the female, during the first month or two after producing cubs, which she does but once in two years, and then two or three at a birth, conceals herself with the cubs in the hollow of a decayed tree, until they are able to follow her, leaving her den neither for food nor for water, but subsisting, as before described, on her own internal fat and juices—which is the more astonishing, when we consider that, during this period, she self-supported, supports also, from the same internal storehouse, her voracious family.

The Bears make their beds in the thickest canebrakes in the vicinity of their watering places, to which they have their regular paths, which they never change, so long as they bed in, the



some of the best in which they have to be and they, accordingly, setting their feet down in the old tracks.

By observation of these facts, it is easy for a skilful guide to select for a party a ground selected next night, on which they shall be nearly certain of finding great sport on the morrow.

The camping is performed much as the same operation has been described with regard to Mexico and Central America, on page 244, except that here it is a gun to make temporary shelters of the wild cane, and make them with palmetto leaves, and sometimes of the heavy reeds and occasional shrubs.

As soon as the first unsavory hunters are sent to cut, called *haches*, or called the weapons called, and the teams called together, the party proceeds quietly and calmly to the place selected for the tracing off, and, as reaching it, two or three of the oldest and most experienced hunters dismount and enter the cane tracks with the hounds, or with this age the dense thicket now leftmost now hanging over on the hounds and keep, as they speak the fire of the animal, and make the hounds run out, either because on the spot there is no more.

Some of these, as soon as the hounds were taken out of the brake, have hurried forward and taken up their stations along the margin of the thicket, so that, should the animal come from the other, whenever, from the discovery of path, or otherwise, it is turned or from any other of the facts they think it likely the deer may turn himself, others continue in the saddle on either head of the brake, until the least and crash of tongues proclaim that the deer is shot, when they all stop forward faster sketched, endeavoring to get ahead of the deer, when they rush into the country, and if they can bend the quarry, often succeed in killing him before he is brought to bay. If they fail in this, and the shot does not prove fatal, forward again is the word, until the prolonged clamor of the pack soon continues to a single spot, and stationary, announces that the savage is at bay. Then it ensues a heading and determined rush into the thicket, in desperate but friendly rivalry of the hunters striving who shall obtain the honor of the first blood, and the death.



If the first shot be a miss, or inflict only a superficial wound, the dogs, which have been baying him as a wary wrench, the boldest now dashing in and giving him a nip, and instantly, if so fortunate as to escape his long so fatal blow, retreating to a secure distance, break in upon him with a simultaneous rush of tongues, but knocking them over right and left, he finds his way clear through and again onward, onward through the densest cane, cracking like straw on stubble before his onward impetus, with the pack again yelling at his heels, till his speed slackens, his wind fails him, he again turns to the combat, and is at length brought down by a better aimed and deadlier bullet.

The head of a Bear never should be aimed at; in the first place, because the animal, when at bay, keeps it constantly in motion, so that it offers anything but an easy mark; in the second, that it is so firm, and of a form so singularly rounded, that unless the ball strike it at right angles, on a perpendicular line, it is almost sure to glance off at a tangent, without inflicting a wound.

The best places at which to aim are, the centre of the breast if the Bear be coming directly at you; if he be facing you, erect on his hind quarters, a little to the left, and low down on the breast toward the belly; if he be crossing you, behind the shoulder, about the arch of the rib. In any one of these places, an ounce, or even a half ounce bullet—I should be loath to shoot at a Bear with anything smaller—will find the heart, and do the business, without giving the trouble of a second shot.

If it be necessary to take to the knife, never strike, for the Bear is sure to parry the blow, but always thrust, which if it take effect, inflicts a far more certain and deadly wound; and in thrusting, keep the edge of your blade, which should be very keen and heavy, upward and outward, if you are facing the animal; and forward, if you are standing against his broadside. By this means his paw, in parrying, will meet the edge of the knife, which will probably disable him. But the better way with a wounded Bear, if your dogs are in such sufficient force,



and in places so smooth, to occupy his attention, so that he if your rifle is good, and as delicately as possible, may then step upon up to him to give him the chance of a vital point of his body.

Often, if they are long run, and cautious, he suddenly, with in these countries, and learn one will often see, are very apt to make circles, and return to the line from which they were first started—the diurnal, the regular, often, the game is about, and he turns to give you some better shot, but being you do better to not be put on the path by which he is likely to return, and await his coming patiently.

In crossing rivers, or streams, these eagles and hawks will always take advantage of a better position where they may have taken one, if there be any in the vicinity of their course, and for it they will frequently shape their path, so that it is a common and by no means unusual occurrence, when the cry of the hawk betokens that the quarry is heading for a known stream, to dash forward and take post at any crossing by which the hunt may be aware, sometimes—always the eagles to keep well overhead. As a general rule, no hawk, or eagle, or even wild fowl, can be approached closely down river, although I believe it is the same and not the case of the latter, to which our presence is obnoxious.

There is another noble animal peculiar to these regions, fiercer and more dangerous than any, but he is rare, and of his habits and whereabouts little is known—I mean the Wild Bull—I do not mean the Bison, nor a Domestic Bull which may have broken loose and taken to the forest accidentally, but the descendant of the cattle turned out by the earliest Spanish settlers, to increase and multiply in the wilderness, the progeny perhaps of the famous Bulls of Andalusia, which were the pride and terror of the plazas de toros, at Grenada, or Madrid, for the delight of Moorish kings, or proper Spanish nobles. Of these tremendous animals, I know nothing except an anecdote of the late General Floyd, who it is said used to encounter them and kill them single-handed, on horseback, with the lance.



Now, I believe, they are becoming scarce, and are rarely or never hunted, though, of course they are dealt with summarily, if encountered while in pursuit of hunting game. These animals, the Wolf, the Wild Cat, and the Cougar, or Panther, all of which are occasionally hunted with hounds, and two of which ever receive grace in London, if encountered in the recesses of our forests, but which are not in any sort to be regarded as game, and which we never, I might almost say, hunted in form and of malice prepense.

None is the *Gazelle* Bear—*Ursus Horribilis*—which is to America, what the Lion is to Southern Africa, and the Tiger to Bengal, the fiercest and most voracious of all its quadrupeds, and probably in fiercest, curiosity, and wanton thirst of blood, more to be dreaded than either of the Royal Cats, which despite a that has been said of them, are but sneaking assassins at all, which would rather run than fight any day, unless, when very sorely pressed by famine, or pinned in a corner. The *Gazelle* Bear, however, has not the least idea of running, unless he is you; in which direction he persists with so much tenacity that it is not very easy to say what will stop him—being *ditto* as an Irishman understands the word, has no effect on him whatever, as is proved by the fact recorded by those adventurous and courageous travellers, Captains Lewis and Clarke, the first explorers of the haunts of this pleasing gentleman, who state that one individual of this race, which measured above eight feet in length and five in girth, swam half a mile and lived half an hour, or thereabouts, after having shot five times through the lungs, and receiving five other wounds, any of which, in ordinary animals, would be deemed mortal.

The *Gazelle* Bear has been known to fight desperately after being shot through the cavity of the heart; and the only certain death wound that can be inflicted on him is by a bullet through the brain, which, from the peculiar form of the skull, the shape of the muscles which protect it, and the extreme hardness of the bone, it is almost impossible to send to this mark. In like manner, the thickness of his hide and the shag-







who hunt them, are as numerous almost as the Bear that are killed. They are not an animal that permits of a system in hunting them, and it is for this reason that they are so dangerous and difficult to destroy. The experience of one hunt may cost a hunter or a life in the next one, if used as a criterion; and fatal, indeed, is the mistake, if it comes to grappling with an animal whose gigantic strength enables him to lift a horse in his huge arms, and hunt it away as a prize. There is one terrible exception to this rule, one hunt of the animal may be certainly calculated on, but a daring hunter only can take advantage of it.

"The Grizzly Bear, like the Tiger and Lion, leave their caves in which they live, but they use them principally as a safe lodging place, when the cold of winter renders them torpid and desirous to sleep. To these caves their entire life in the fall, and they seldom venture out until the warmth of spring. Sometimes two occupy one cave, but this is not often the case, as the voracity of the animal is proverbial, they preferring to be solitary and alone. A knowledge of the forests, and an occasional trading for Bear, inform the hunter of these caves, and the only hunt of the Grizzly Bear that can with certainty be taken advantage of is the one of his home in his cave alive, if at the proper season. And the hunter has the terrible liberty of entering his cave single-handed and there destroying him. Of the only method of hunting the Grizzly Bear we would attempt a description.

"The thought of entering a cave inhabited by one of the most powerful beasts of prey, is one calculated to try the strength of the best nerves, and when it is considered that the least misapprehension, the smallest mistake, may cause, and probably will result to the hunter, an instant death, it certainly exhibits the highest demonstration of physical courage to pursue such a method of hunting. Yet there are many persons in the forests of North America who engage in such perilous adventures with no other object in view than the sport of a hearty man. The hunter's preparations to 'beard the lion in his den,' commence







taken from the comb of wild bees, softened by the grease of the Bear. This candle has a large wick, and emits a brilliant flame. Nothing else is needed but the rifle; the knife and the belt are useless, for if a struggle should ensue that would make it available, the fire is too powerful to mind its trusts before the hand using it would be dead. Bearing this candle before him, with the rifle in a convenient position, the hunter silently enters the cave, he is soon surrounded by darkness, and is totally unconscious where his enemy will reveal himself. Having fixed the candle on the ground in a firm position, with an apparatus provided, he lights it, and its burning flame soon penetrates into the recesses of the cavern, disclosing what is hidden in the obscurity, more or less complete. The hunter now places himself on his belly, craves the candle between the back part of the cave, where the Bear, and himself, in the position, with the muzzle of the rifle protruding out in front of him, he patiently waits for his victim. A short time only elapses before him is aroused by the light, the bear, made by his waking from sleep attracts the hunter, and he soon distinguishes the black mass, moving, stretching and yawning, like a person awakened from a deep sleep. The hunter moves not, but prepares his rifle; the Bear, finally roused, turns his head toward the candle, and with slow and waddling steps approaches it. Now is the time that tries the nerves of the hunter; too late to retreat, his life hangs upon his certain aim and the goodness of his powder. The slightest variation in the bullet, or a flashing pan, and he is a doomed man. So tenacious of life is the common Black Bear, that it is frequently wounded in its most vital parts, and still will escape, or give terrible battle. But the Grizzly Bear seems protected by an infinite greater tenacity of life; his skin, covered by matted hair, and the huge bones of his body, protects the heart as if encased in a wall, while the brain is buried in a skull compared to which adamant is not harder. A bullet striking the Bear's forehead would flatten if it struck squarely on the solid bone, as if fired against a rock; and dangerous indeed would it be, to take the chances of



presses the animal's heart. With these details before me, and the heart, the Hunt approaches the game, and at every moment there is a possibility of some uncommon accident, such as the beast, and rather rarely his pack, becoming lost or left in some corner of which will extinguish it, and leave the hunter and the Hunt in total darkness. This dreadful moment is the death of the Hunt, the part of the effort, the end, with shivering noise, and as the heart disappears the end, it is exactly that, penetrates the eye of the large animal, the only place where it would find a passage to the brain, and thus not only gives the death wound, but instantly paralyzing, that is, temporary resistance may be made. On such chances the American hunter puts his life, and often the safety of his pack, the danger.

T. B. T."

With this brilliant sketch, I close my observations on the Hunt in particular, and on Western hunting in general. I have written with the spirit of a hunter, and I have not been more than of erring, and I have written with a practical independence, and that I have no responsibility, being obliged to depend for my facts on what I have heard, and my conversation or correspondence with those who have been in the best moment of the wilderness, on the hunting, and on the state of the country, and who, perhaps, founded on the notes and experience of years, are therefore more correct than any I could have arrived at in the country. I have not been through the guns of Elk and Bison,—on the strength of the best of which every traveller who goes down himself fully justified in discussing learnedly about all the wild sports of the West.

I mention this, in order to deprecate any severity of censure on this portion of my work, should errors occur, though I hope there are none so flagrant as to mention such. With many of the animals, now state of domestication, I am familiar, as I am with the weapons used in their destruction, and I intimately know men who have killed all the animals I have recorded here, except perhaps, the Antelope, the Rocky Mountain Goat the



Black-tailed Deer, and the *Glinzey* Bear, almost as often as I have killed Woodcock, and who seems familiar, at least, with the chase of those, as I pretend to be with the pursuit of these.

For the rest, both with regard to this and other heads of my subject, I shall be but too grateful to any kindred spirits and friends, whether known or unknown, who, whether from love of the author or of the subject, will be so kind as to forward me, either the *corrections of errors*, or the *statements of new facts*, relating to the habits, haunts, food, and, more especially, the seasons and migrations, of every sort of Game, which may be embodied in future editions of the present work.



## MOUNTAIN SPORTS.



mountain goat, or *Capra*, such is his proper name, the goat.

There is known in our forests an enormous and, as yet, accurate description exists, and I can do no better of its appearance, than give a picture, which I have just finished, being taken directly from nature, and which, as the artist states that "the makers do not consider its fleece of much worth," and for the same reason, on the same page, asserts that "it is such that the fleece of the goat, or finer as that of the celebrated Shawl Goat of Cashmere."

Its flesh is said to be unwholesome; and, although, as before known positively concerning the animal it would not appear that there is much difficulty in its pursuit or capture, beyond the difficulties inherent to its haunts, and unavoidable by visitors to the *Utah Trade of America*, the Rocky Mountains.

This much is certain that it bears no analogy whatever to the Chamois of the Alps, or the Ibex of the Pyrenees, both of which are smooth, sleek-coated animals, nearer akin to the





Mountain Goat







That of Antelope, than to the Goat. This creature, on the contrary, has no relation either to Deer or Antelope, and would seem to border closely on the Sheep, and to be an interesting link between that and the true Goat. To this conclusion I am led by the loose and floppy nature of its covering, as also by the shortness of its horns.

Had it not been for these, I should have feared that some analogy must have existed between this Goat and that described and used by Homer, a very low sort of domestic intervening race, and lately rediscovered by English travellers, reported to be killed on the Isle of Cos, or Rhodes, and termed *nomades* (Goats), in the *Paradise Lost*.

If it be true that the Goat is rarely killed by the hunters, it seems almost a natural consequence, somewhat speaking, in all countries, the Wild Goat of the mountain tops is a proverb, the most wary and difficult to be pursued of all beasts of chase—their extraordinary agility and swiftness, no less than swiftness of foot, giving them an advantage among their rocky, and often, to the trial of man, inaccessible fastnesses, which neither the craft nor the deadly firearms of the civilized man can subvert or neutralize; but I am inclined to doubt the truth of the assertion.

I conceive that the Rocky Mountain Goat is rarely an object of pursuit or systematic pursuit, and that when killed at all, it is done by accident, during the winter season, the snows of which are used to drive it down into the valleys.

While among the horrid crags and awful precipices of these dread mountain sentinels which it inhabits, and among which it resolute tenacity and courage, where man can only creep and cling, it is out of the nature of things that it can be captured easily. It is not easy to see it, in the first place; and when seen, to catch and kill or subvert it, must require that the hunter should be every inch a man.

With regard to striking these animals—of course, there is no other way of approaching them—I have but one or two remarks to make, which I have deferred to this place, rather than con-



meet them with my general hints on this subject. None, as they relate to deer, meets particularly their other animal game, being known exclusively among birds, they are here the *cock and hen*.

The first is, at present, to stalk the Mountain Goat, turning the sun on your back, and in doing so, the other is to approach him, come it possible, from the upper to the lower ground. I say, *if possible*, it is possible, but is dependent on the direction of the wind, those which it is impossible, under any circumstances, to approach Deer or Goats.

Both these animals have the habit, so far as they can, of always keeping the upper ground, and, consequently, it is their nature to keep the toughest song out for any enemy's approaches from above. They rarely are compassed, look upward.

Wild geese, on the contrary, and birds of all kinds, expecting all attacks from above, are most easily approached from below upward.

Cloudy weather, with a light, steady wind from one quarter will give a more successful prospect, as very few animals are strong. High and variable winds are very bad, as they render the birds wild, and make it more difficult to approach them. In general, the wind will be somewhat toward the West. Plover, Grouse, and other birds, with the exception of the Black Grouse, which is most readily overtaken in a thick fog, can generally be seen before you have a suspicion of their whereabouts.

Of the Mountain Goat I have no more to say, nor much more of the Mountain Sports at all. Five species of Grouse, — the Green Grouse of the Plains, *Tetrao. Tympanuchus*, the Sharp-tailed Grouse, *Tetrao. Pennsylvanicus*, the Dusky Grouse, *Tetrao. Obscurus*, the Rock Ptarmigan, *Tetrao. R. can.*, and the White-tailed Ptarmigan, *Lepus. leucurus* — are natives north of the 36th lat. of the Rocky Mountains — some dwelling in the highest and most difficult regions, some in the lower valleys, and some on the Creek and the Prairie, and the Sharp-tailed Grouse — on the great prairie to the west. The first of the two latter is found only on those prairie which produce the autumnal, or



wild wormwood, and its shade is said to be rendered no longer by the trees, as to be unsuitable for hungry men. The Skarpetailed Grouse, of all the true varieties, is that which approaches the most nearly to the species of *scapularis*, to be killed on the Missouri, as far south as 41° north latitude. It is a beautiful and delicious bird. Mr. Bennett, formerly a collector and naturalist and taxidermist at New York, to whom I had the opportunity of showing my thanks for assistance in this respect, has found out the right specimens, and, with a keen, intemperate but honest eye, can find in such numbers as to constitute good sport.

For the present, however, no birds known of the habits of the game are so well defined, and are valued as game, not very few, as the *scapularis*, in a true sense of the word, who visit them, that I deem it more prudent to then extract and where it is necessary, to fix a future relation, if necessary, after American wars and civilization shall have full and complete of American arms, to deal more at large with the game of the lately conquered territories. I believe all the game, in the proper sense of the term, which they do contain, from the extreme northern to the utmost southern limit, has been named. It will be time to speak of the how, the when, and the where to shoot them, when there shall be the when to do so on the ground.

In the meantime, the letters and notes later collected by those gallant explorers of the remotest districts, and dwellers on the extreme frontiers of the United States, the officers I mean of the American army, will rapidly and surely add to our knowledge on these points.

For common credit, and to the honor of West Point, be it spoken, that nine-tenths of all the correct information we possess, of the geography, geology, topography, and natural history of the farther Territories and Districts, apart from mere verbiage and fable, come from the members of the one, and the graduates of the other.

A large command, I observe, has lately received the route for California, and when once they shall have got warm in their



I would not wish to rely upon any book for some such information as to the habits of many mammals now—how they express themselves I am now striving so vainly to describe—to be so unobtrusive.

I hope my present, that when all on my mind went to give the world at large a more correct idea of the *total* picture of the life of birds, they will disregard a little more to mention that Captain Wilcox's *condemned* birds, in describing that of the *Starling* Bear. "Its flesh," says the gallant captain, "is the same as that of the Indians, and varies with the season." We possess that to-night have ended, "marked the white-bellied bear as meaning a evidently that its flesh is *not* as good, when, in some cases, it is, in fact, *not* known to be good. Through the Journal the food of all who can find it—except, by the way, that I never heard of other white or Indian-supplying up-country, which, unless so they be, is a favorite *plat* of my friend the Bear.



## TURKEY SHOOTING.



UNDOUBTEDLY the most delicious, as it is the largest and noblest, of all gallinaceous game, there is yet little sport in its pursuit, and beyond mere proficiency with the rifle, little skill required to kill it. The case is the same with this, as with all other wild and forest-haunting fowls and animals.

In the extent of the game, and its variety, or its excellence, depends all the excitement of its pursuit and capture. It is extremely wild and wary, running in flocks when alarmed, at such a rate that it is difficult for a speedy dog to overtake it, and never, so far as I have heard or read, lying close enough to allow itself to be stood by Pointers or Setters, or to be shot on the wing.

The ways adopted for hunting it, are, therefore, all dependent on ambush or stratagem, the shooter rather conceals himself in some place which commands a view of the spots in which they are in the habit of scratching and turning the dry leaves, in order to pick up their food, or makes use of a sort of pipe or call, by which the cry or yelp, as it is termed, of the female may be simulated so exactly, as to bring the old males, or gobblers, within gunshot, almost without fail. Mr. Audubon relates an instance which befel himself, indicating the singular boldness, if it should not rather be called stupidity, of the



men likely to meet the females season after the family, with which they may be pot-hunted at that time.

Attracted by the drumming of *Caprimulgus vociferans*, I had just started, when the first of the females came, and I happened to be near. While in the air she uttered some low, hoarse, guttural notes, and, when she flew to the ground, she uttered a loud, shrill note, which I heard her uttering at intervals during the rest of the day. She was not particularly bold, and, as I approached her, she constantly uttered the quivering notes I have just here when I approached and retreated, and, as I turned about the direction in which they came, I then came to meet her. At last, she alighted by the side of a large rock near one of my gun, and waited with impatience for a good opportunity. She uttered a hoarse yelping cry, as she flew to the female which was then perched on the same. I heard one of the two and saw about thirty fine *Chrysomitris* gather cautiously toward the new spot where I lay concealed. They came so near, that the female, her eyes evidently being raised, was, I think, certain, and I fired three times. The first instead of flying off, fell a writhing, and the dead company rose, and I saw that she was not more than a couple of inches from me. I never have recovered the lost chance. As I showed I was not, and marching up to the place where the dead birds were, drove away the survivors."

Had the kindly-disposed ducking female been content in my pleasant net, I could, from the pin in hole of the head, shell, and organization, so perfect as the eye of the Turkey, to meet its wing, as I could have related without a shadow of hesitations, that the worthy naturalist, who would never pause to consider whether the game could be used or not, but who would remain a hunter. I am so that I have seen them in the more honest, killing, without either skill or excitement—just that these great imitative godfathers deceive one another, and take up to the fact, that I can trust, who, being the well-known very impetuous to his own, and seeing the happy shake, speak his unerring bullet to the mark, and pays the mu-





THE WILD TURKEY







action for his imitative notes, by which the Turkeys, could they reason, would doubtless consider a well-merited and expiatory death.

The fairness of these gentry in the way of sportmen, may be estimated by the following observation, quoted, identically, from Mr. Audubon:—"During winter, many of our real hunters shoot them by moonlight, on the roads, where these birds will frequently stand a reputation of the reports of a rifle, although they would fly from the attack of an owl, or even, perhaps, from his presence!" The italics of the word *real* are Mr. Audubon's, not mine; and I scarcely know what he means to imply by the term, unless that the fellows whom he so denigrates, shoot for the work of the game, not for the sport, and are, in fact, what I should call *real* pointers, and utterly unworthy of the name of hunter, much less sportsman, with both which names, thank heaven! some prestige of fair play and sense of honor is still connected; were it not so, as well be at once the hunter, and where the difference between the greenwood and the shambles!

The best thing that can be said in defence of such practices, is, that except its flavor and its beauty, the Wild Turkey has no game quality about it. It sneaks through the grass or bushes with what Mr. Audubon picturesquely terms "a dawning straggling way of running, which, awkward as it may seem, enables them to outstep any other animal." The same gentleman observes, that he has often pursued them for hours in succession, on a good horse, without being able to compel them to take wing, and has ultimately given it up in despair.

The nearest approach to fairness, or sport, that is ever attempted with regard to these birds, is to train a fast yelping cur, or terrier, to run into them on full cry, flush them, and after forcing them to rise in different directions, chase them, still yelping, to the trees, on which they alight, and out of which the hunter picks them one by one with his rifle, or BB shot.

Such sport is all very well for those gentlemen who like it; I, for one, am always delighted to see a Wild Turkey on the







## L'ENTOT.

And thus having run my brief circle, I find myself at the spot whence I started—my race is run—my shaft is shot, and may I hope that I part from thee, if unextracted, at least not all uncircumstanced, gentle sportsman, and I trust not, sanguine Reader, and that some thought of me may dwell with thee, amid the green leaved of the autumnal forest, or on the boundless prairies of the West, and that between us two, although we never have met, and never, it is most like, shall meet, some kindness of thought, some touch of mutual friend-ship, may exist, born of tastes kindred, and pursuits common, to all who take delight in the hunt sportsman—Good sport to thee, and I fare thee well and at the close, sometimes, of a dashing run, or of a capital day's shooting, think upon one who would have been there, and remember that every one of our sporting brotherhood, who is true in the spirit, and staunch in the principle, hath a friend ever and willing servant in

FRANK FORESTER.

THE CINCINNATI, August 1, 1848.







## APPENDIX.—(A.)

### THE FISH AND FISHING

OF NORTH AMERICA.

A sort of half promise, made in the earlier portion of this work, induces me to add a few words, under this head, though they will be so brief and of so general a nature as to come more properly under the form of an Appendix, than into the body of the work itself.

In Field Sports, Fishing cannot properly be included, although it is undoubtedly a branch of Sportsmanship that it would scarcely be proper to pass it over without some notice; and yet to so brief a space must my remarks be limited, that anything more than a few of the most passing hints, would be worse than absurd, and impertinent.

The Fishing of the United States and British Provinces of North America is, to say the least, not inferior to the Shooting and Hunting; more especially in the Northern and Eastern Districts of both.

In Maine, from the mouth of the Kennebeck, eastward, Salmon and Sea Trout are abundant, though they are not, for the most part, much taken with the rod and line, the New England waters, so far as Salmon are concerned, being for the most part virgin of the Fish. In Nova Scotia, however, and New Brunswick, such is not the case, and there, as well as in Lac du Canadi, so far up as the Thousand Islands, immense sport is had annually by amateurs with this king of fishes. The St. John's, the St. Lawrence, and all their tributaries, abound with Salmon







**Siluriformes.**—A large, dull-colored deep-water fish, which, although it is mostly nocturnal, is taken in deep water, with a frequent and persistent pinkish or reddish band, a common round blotch on the head, and a black spot on the snout, from Pennsylvania southward. It is common west of the Gulf of Mexico, but is not abundant in the Gulf.

The front of the head, especially the snout, is, in the adults, more distinctly yellow than the posterior, well-known, red spotted line on the snout, especially at the points, and is usually rather broad. It is a fish which is rarely caught in the United States.

In addition to Hesperian sands, and the often common olivine, and iron-ore fragments, the Hesperian Spectral Front, on the whole, is a typical desert province, and containing every type of rock, from the most common sandstone, to the most highly altered and metamorphosed, and in most places that is really a mountain.

The *Canis lupus* in North America is much more numerous than in Europe, does not eat the same food, and is probably that there are some differences in its constitution and strength, but the same. They may be taken with all the same in England, but with a much coarser tackle, and with a larger hook, which is decidedly more killing in America.

Other fish there are the name of which I begin, the best perhaps, of these, and the most sporting—after the Trout on the Black River of the lakes, which will rise freely to a large red and white, made of Muscovy, or Parrot and Silver Parrot, and so forth and so on. The Pike, Muskellunge, Pickerel, and Sturgeon, all of which would put to shame a Delaware trout, and for its southern and west, the Catfish, stands for its gentle size. Sturgeon are abundant in all the lower rivers, but are little used as an article of food. Eel, Perch, and Bass, a fine variety are raised by the Indians, and run for to a specimen fish, there is a catch called "Trout," to the southward, which certainly is not a Trout, though I do not know its correct appellation, which is eagerly pursued, and considered a game fish.



For my own part, I am little for any poem, & I have not, but I wish for Trout or Salmon, and perhaps the Silver Fish—though I have never tried them, but feeling so, perhaps for Bass and Muskellunge would be excellent sport for those who affect.

Trout is presented as, comparatively speaking, little understood or practiced in the United States, but *Salmo trutta* and in some, even for Trout, and in accompanied distinction, though the number of them is now not a few, but *Salmo trutta nigrofasciatus nigrofasciatus*.

With these few notes, I cry hold, enough—there is matter for a volume on the subject, and a most excellent one might be compiled and written on the subject. In the meantime, I commend my friends and readers to the beautiful American edition of Walter's Angler, with notes and additions, lately published by Messrs. Wiley and Putnam of New York, under the auspices of that distinguished scholar and divine, the Rev. Dr. H. H. H. of Philadelphia.



## APPENDIX.—(B.)

### SPORTING NOMENCLATURE.

It has been suggested to me by a friend, from whom no suggestion is ever disregarded, WALTER F. POSEY, Esq., of the Spirit of the Times, that the sportsman's sporting nomenclature and terminology is little understood, or so much neglected here, that a brief compilation of the most common words in general use, would be an addition to this work, not unacceptable to the sporting world. I Amuse, and agreeing with him in the fact, I have readily fallen into his views.

I shall proceed, therefore, to give first, the technical name for a single hatching of young from every game bird—that I mean which we call a *brood*, when speaking of chickens. I shall then go on to the technical term for larger collections of game birds, such as we should call flights or flocks, if speaking of small birds; and, lastly, I shall point out to what birds, or animals, the words *hive*, *bevy*, and *couple*, are properly applicable.

TURKEYS, a single hatching of, is a *brood*.

\*PHEASANTS, " " " *side*.

\*PARTRIDGES, " " " *covey*.

GOOSE, before they can fly, *brood*.

" afterward, *pack*.

QUAIL, *bevy*.

WOODCOCK, *brood*.

SNipe, *brood*.

\* Observe here, that neither Partridge nor Pheasant existing in America, the words *side* and *covey* are useless. What is generally called, therefore, a *covey* of Partridge is a *pack* of BERRY Grouse.

† When we use the term *Grouse* alone, the *PROCESSION Grouse* is understood to be intended.



For large flocks of Wild-fowl, we say of—

SWANS, a *whitewax*.

GESE, a *gaggle*.

BRENT, a *gang*.

DUCK, a *team*,—smaller number, a *plump*.

WINGED, a *company*, or *trip*.

TEAL, a *flock*.

SNIP, a *whisp*.

PLIVERS, and all Shore Birds, a *flock*.

BERRERS and HERONS, a *rage*.

LARKS, an *exaltation*.

GROUSE,

PARTRIDGE, { several hatchings united, a *pack*.

425 100.

THE *names of the several species of Wild-duck flocks, or of their speakers, of Wild-duck flocks,*

As many as go together of—

BROOD,	culge Buffalo,	} are a <i>herd</i> .
STAG,		
MOOSE,		
CARIBOO,		

ELK, a *gang*.

WOLVER, a *drone*.

The female of the—

BIRD,	} is a <i>Cow</i> .
MOOSE,	
CARIBOO,	

ELK, *Doc Elk*.

STAG, or HART, *Hiad*.

DEER, *Doc*.

THE *names of the several species of Wild-duck flocks, or of their speakers, of Wild-duck flocks,*

The *names of the several species of Wild-duck flocks, or of their speakers, of Wild-duck flocks,*



Two GASTR,	}	are a brace,—three are a <i>leash</i> .
" PHEASANTS,		
" PARTRIDGE,		
" QUAIL,		
" HARES,		
" LEPUS,		

Two WOODCOCK,	}	are a <i>couple</i> ,—three are a <i>couple and a half</i> .
" SNIP,		
" WILD-FOWL of all kinds,		
" PLOVER, and Shore Birds,		
" RABBIT,		

And the quail, these being the *same* is a bird-speaking kind:—All large game is Deer, Squirrel, Goose, Hares, are numbered numerically, as one, two, three, &c.

Two HOUNDS,	}	are a <i>couple</i> ,—three are a <i>leash</i> .
" HARRIERS,		
" BEAGLES,		

Two POINTERS,	}	are a <i>brace</i> ,—three are a <i>leash</i> .
" SETTERS,		
" SPANIELS,		
" GREYHOUNDS,		
" TERRIERS,		

All other dogs are reckoned numerically.

By a pack of forty, fifty and twenty couple is generally understood, though it is not usual to take out, except where the woods are very large and dense, above one ten or twenty couple.

When a *fox* breaks out the cry is *trill*!

" Fox " " *tallilo!* *whoop!*

" Hunt, bound out with Hares, *trill*!

" " " with Greyhounds, *who!*

To make Pointers, or Setters, *stand*, *trill*!

" " " drop to shot, *charge!*

" " " come behind, *heel!*

" " " careful, *steady!*

" " " rise from the charge, *hold up!*

" " " hunt for killed game, *seek dead!*

" " " when found, *fetch!*



When a very painful tickled before horses, the death rattle is invariably *who-whoop*?

When an animal turns on the ground, he is *at bay*?

When a Stag is driven by hounds to water, *quarts*?

When a Fox " " " to ground, he *earths*?

When a Hound, after drinking, breaks water, he *vents*?

An " " " to collect some very common errors of parlance.

A Horse never *uses* his wheels, *mashes*, *tricks*, *gaiters*, *cutters*, *gallops*. These are all his *paces*.

A Horse *is* *broken*, and *out of his skin*. No more words in the common phrase goes here.

A male Horse is a *stallion*.

A *stallion* of Horses is *a stall*. The application of the latter term to the male Horse, is not merely a squeamishness, but sheer nonsense.

The expression Fox *run down*, or a Dog *is beat out a dog*, and the use of the latter word is for the most objectionable of the two, as implying an improper consciousness.



## APPENDIX.—(C.)

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### A FEW MEMORANDA,

#### AND BRIEF RECEIPTS FOR SPORTSMEN.

It is well that a Sportsman, without being anything of an epicure, should, like an old companion, know a little of the art of the country. *Overland*, in the country, even in this country of abundance, he is very likely to find badly, whereas, with a very little knowledge and a very little care, and having the pleasure to carry with him a few simple condiments, he can live like a prince.

In the first place, he should always carry his own black tea with him, as he would not be compelled to drink execrable eye-coffee. I commend him also to be his own liquor-bearer, as the spirits in country places are usually execrable, especially the rye-whiskey of Pennsylvania and the West.

If, however, he determines to take his chance in this matter, I advise him, in all cases, to eschew brandy, which is the most easily adulterated of all liquors, and, when adulterated, the worst.

In New York and New Jersey, the rye-whiskey, in country places, is decidedly the best thing to be got; it is too cheap to adulterate, and it is a wholesome liquor in itself—when very old, it is a very fine liquor—the taste is disagreeable, as it is apt to be at first, is completely disguised by sugar and lemon-juice—and, whether hot or cold, it will be so found a very tolerable beverage.

The best receipt I know for cold punch, and that which I always use, is, to one tumbler of crushed sugar, one and a-half of spirit, six of water, the peel of two lemons, and the juice of one.







you can generally manage, without oil, using the *stomach paper* of the Indians of the interior, though sometimes tallow, if they are wont to be, if they fancy the words of the natives, instead of infringed.

For breakfast, if you do not choose to wait till the natural season, which, if you do, you will lose the better part of the day, give the new skin of your supper well out, with much water, and milk, to take you to bed—and the next morning be up, the water over a fire, or fire with your milk, with some sugar, and ginger to taste, but if you are not a person for excitation, the milk is preferred for a purgative, and boiled with a steady hand.

After the first day, if you have your skin at your disposal, you will be very comfortable, and for the same thing, but if you cannot afford it, it is better to be offered to meet a horse, your horse, by doing which they will send you to the water, and you will be prepared to meet them, Richard Gibson, Waukegan, Ill., says, and if you can, it is in this way, select those who are not and let them be dressed and inhabited in keeping, and be cleaned, quartered, and placed in a large pot, with some pieces of fat pork, cut small potatoes, an onion or two, a little chopped parsley, salt and black pepper to your taste, and it will be a vast addition, if you can get a red pepper-pod or two, which are generally to be found at every country tavern, and a mushing or two, which you often find and pocket in your perambulation over upland pastures.

To the water you put into the pot, provided there is enough to keep the mess, and prevent it from burning, and the slower you boil it, the better.

When done, you will have a *potage à la Mex. Maritimes*, which George D. Lewis, Esq. of Appling might envy you.

Hawken says that if you take and quarter any kind of Wild-fowl, which are too truly to eat, is ducks, geese, or turkeys, beat them to a mass in a quart of water to each bird, with onion, and add to it, when on the point of serving it, a spoonful or two of Harvey sauce, some lemon juice, cayenne, and a gill of wine, you will have a very palatable mess.



I never tried it, but it is well worth trying, especially in the summer season, if Bay Sturgeon Food cannot be procured at times to fare hungrily enough.

I used the American Hare, and the Hindustani chickens, the delicious, either in this way, or stewed with rice and pork, as recommended for the fowl.

At all events, nothing can be conceived better than a preparation that assumes the name of a pot-pourri, but is regularly brewed, put in a deep, earthen, dish, at the bottom of which a tin pan will receive the purpose, cut into the Hare, are yuccated and incensed with some pieces of burnt pork, a few hard eggs, a red pepper put in two, and made into a paste. I am supposing that you should obtain a ramp-stew, for if you eat, I have seen the place of the pot, with the same name, though the food before being put into the dish, it was first well seasoned, and boiled very low. I have it known it consisted of a mixture of milk, yolk, and water, stirred together, and put in a pot, and is put into a dish with all the same, and is consumed. It is the recipe from the days of Lucullus to Udo.

It is well, on a trip, at the end of a long journey, to be prepared with a few small pieces of food, and some of the same. For the purpose, nothing is better than a small piece of pork, cut into a Henry, and well seasoned. I have seen a piece of it, dissolved in water, and mixed with a small quantity of fat, and it will produce its effects very rapidly and sufficiently, though mildly.

For a cold, or other very severe, by increasing cold water, a hot foot-bath, with a handful of nut-milk, will produce a pleasant and salutary effect.

It is well also to know that a cup of salt water, to be had any where, after minutes pastures, does more harm than a cup of plain water, and is full of salt water, and is not to be down on the skin, or compared to a drink, or even a cup of salt water.

For a cold, or other very severe, by increasing cold water, a hot foot-bath, with a handful of nut-milk, will produce a pleasant and salutary effect.



been made *red-hot*, thrown suddenly into the basin, and you will be steamed to your heart's content.

A good formula for a pill of strong aperient qualities, which will not need a black draught to wash it down on the following morning, is this—

R Mass hydrag. ....	12 grs.
Comp. sal. colocynth .....	℥ ℥
Scammon .....	℥ ℥

Divide into six pills, or if a large pill is objectionable, twelve. If the former, five or the latter, four pills, will make a very sufficient dose.

The example needs, necessarily, a box or two of saltille powders, a case of tools, a case of oil, and a few specimens should even take the freedom powder, adhesive plaster, do of count plaster, and a bottle of Fowler's Chlorine for colds, he uses, or rheumatic pains, and enable you to start with attendants, which may be death war, without a doctor's care, and will enable you, like enough, to avoid a long doctor's bill, on your return from your excursion of pleasure.

A very few more words, and I have done; but these last words are not altogether unimportant, for without good tools no man can shoot well; and to keep good tools good, requires both art and method.

Impurities, *never* put a gun away dirty,—even after one shot, if you have a fine and valuable piece, and wish to keep it fine and valuable, take it apart, and clean it then.

First, wash it thoroughly with cold water, and very coarse rough tow, changing the water constantly, until it remains perfectly clean, after being pumped backward and forward through the barrels.

Dry the barrels externally with a rough cloth.

Pour hot water into the muzzles, till the barrels are full, and then run the muzzles of the barrels dry with constant changes of tow, until the muzzles of the barrels, and the tins on hinges withdrawn, are not only dry, but hot.

Then wash a little very fine chicken or goose grease, or muck-







shooting, are much less liable to become loaded, than is generally supposed.

I am in the habit, however, at the end of a scrape, season's work, of putting my gun into a good workman's hands, and letting the powder be taken out, so that I can inspect the barrel myself. If loaded, they could be cleaned out much more conveniently blind than, without run the risk of damaging the barrel, that is, an injury from the harshness of sand, though by the way, I do not have the power of a boy's wire brush to set the powder from barrels.

The best powder in the world for I play I Shotters, is Curtis and Harvey's, which I cannot say is best, I mean strongest and cleanest. Next to that is John Hall's glass-scraper, and, like the former, which I can say that I like, all the rest are mediocre. Duport's smoke powder is strong, but filthy beyond expression. Few shots with it do a gun more than a quarter of all the demand. The second powder has a reputation, but is not so good as it. It is neither strong nor clean.

For Field Shooting, Hawkins's Blacking powder, by Curtis and Harvey, is the best by all odds.

Whatever sized shot you may always use it unmixed. If you use two or more sizes, the heavy shot casts off the light to the right and left, at all sorts of tangents.

The best copper caps in the world are Sharkey's best central fire waterproof, and the most best are Westley Richards' large heavy caps. Both are dull, but they will save their own coat in certainty and cleanliness. The anti-rattle caps I don't like at all—they should be called corrosive. The French caps are very good for pocket pistols.

Powder should always be dried before using, on a hot China plate, but beware of sparks.

For shooting apparatus of all kinds, pouches, belts, flasks, liquor flasks, and the like, Dixon and Sons, of Sheffield, are a hundred to one against the world.

I have done,—therefore adieu, friend. You are set fairly a-field; if you do not succeed, it is not my fault,—fare thee well.



## APPENDIX.—(D.)

### CANINE MADNESS.

From my childhood up to the present I have been among dogs. My father kept a large kennel of Pointers and Setters. From the age of ten years I was among Foxhounds. I have, up to my visiting the United States in Vancouver, perhaps the most sporting society in England; and since I have been in America, I have been without one dog—indeed, to stronger breeds, and with a dozen.

During the space of time referred to, I have known thirty years of close acquaintance with many of the best of the breed, and I can therefore affirm, from long experience, that a mad dog, can have no authenticated instance of canine being mad, so much I have seen, and indeed, ascribed in the first instance, which were certainly more than thirty years.

The consequence of this is, that, in fact, it is impossible, that for many years I was a disbeliever, almost in the possibility of canine madness, at all, at least in the possibility of its communication to any animal, but from the canine race. And, notwithstanding this, I have frequently seen the same, and it must admit, that it is manifestly impossible to determine, and, in the inflammatory disease, arising from punctured wounds, and a sympathetic state of body—to imagination, and to terror.

On these occasions, I am still well satisfied, that four-fifths of the patients, and of the hydropneumatics, are the victims, as well as of the punctured wounds, and of the sympathetic parts.

Some statistics I have obtained from the statistics, I was satisfied that I carried my theory too far, and that the disease is communicable.



ble to the human race, although instances of this are extremely rare, and although the disease, even in the dog, is unusual.

The ignorance, concerning this malady, the superstitious awe in which it is held, the absurdly sung many tales, and the popular notion—that I can call it not any else existing in this country with regard to that highly useful and excellent animal the dog, which has been properly styled the natural friend of man, have induced me to devote a considerable space to the symptoms, treatment, and diagnosis of canine madness, both in the animal and in the human being.

My object being to show what are the real symptoms in the dog, much has been said, but generally misunderstood—what are the symptoms and diseases on which false opinions of man now have been founded, and, lastly, *how* rare the malady is in itself, and how perfectly curable and certain is its cure, if the proper curative course is adopted in time. And, above all things, here, not once for all, I would impress on every one the conviction, that there exists no prophylaxis, no *antidote*, no cure *except the Quack and See*; and especially I would caution them against the use of quick medicines, now widely advertised as of certain effectiveness in this, when it occurs, fearful malady.

Before proceeding to quote and abridge from Mr. Blane, I will observe, for the last time, that—although if we credit news paper reports, *as yet*, a week passes without, at least, a dozen *rabid dogs* being killed, other being a dozen people in every large city in the United States—I am convinced *not a dozen rabid dogs are to be found annually* in any town on the whole continent of America; and farther, that of a dozen persons bitten by *really rabid dogs*, not more than one in four contracts the disease; and that he is in no danger, if he goes to work rightly.

Canine madness, if taken in hand instantly, is a disease infinitely more under the control of the mediciner, than half the maladies to which we are liable,—more so than any malarial fever, for instance, and more so than any serious inflammation; if neglected until too late, it is fatal—so are they. But had I my choice to-morrow, of being bitten by a *certainly rabid dog*,







the time  $t$  was  $W_1(t) \otimes W_2(t)$ , we considered a distribution  $\mathcal{D}_t = \{y_1, y_2, \dots, y_{n_1+n_2}\}$  with  $n_1$  and  $n_2$  independent components  $y_1, \dots, y_{n_1}$  and  $y_{n_1+1}, \dots, y_{n_1+n_2}$  respectively.

[illegible]







*the dog*, as it was never imagined to be a self-generated disease in any other animal.

This statement alone, on such authority, ought to go far to settle all similar popular notions on this subject, and to mitigating the excessive tendency of the laws now daily passed by the *several legislatures* in England, Ireland, Scotland, Portugal, and Tyrrhenian and Adriatic, among other means, corporations!

It may be held to be a positive and established fact, that unless bitten by other dogs, *dogs never go mad!*

I now proceed to an important portion of Mr. Baine's observations on the alleged causes of rabies.

*Professor Baine's observations* on this, as observed by the fixures of the brain, are various. *That* has long been somewhat of a subject of dispute, but the direct proofs to the contrary are too numerous to vary this proposition. It is known that many countries under the torrid zone are entirely free from canine madness, and in such hot climates, as it is found, it does not appear to be the least of these animals, generally, congenial to the humidity or malarial matter. We have Baine's authority for stating, that it is almost, if not entirely, unknown over the continent of South America. In many of the northern seas it is stranger still, and, in Egypt, Volney says he never heard of it. Harvey, Green, and others, inform us, that it has never visited the human frame of Syria. Neither is it more prevalent in cold climates, and, although it sometimes visits northern latitudes, it is no less prevalent for them, and, in Finland, never to be ascertained unknown. In temperate climates, on the contrary, it is most prevalent, not perhaps owing anything to an extraordinary situation, but merely because the cold climates the most populous countries are usually situated, and, in such temperate latitudes, are especially to be noticed. In the United States of America, it is common and frequent, and throughout Europe was one but too well acquainted with it. It is not, however, shown to be the prevalent cause of mad men, as it has been supposed, because having long been found to be its proper, or power of engendering it, and the







can give rise to it without causing any other external activity of the contagion.

"Among the numerous attempts which have been made, I distinguish, however, only two, namely, the 'Volkshochschule' of Völklingen, and the 'Landwirtschaftliche Hochschule' of Münster. The first was founded in 1880, and the second in 1882. At the latter, the students are not only taught agriculture, but also the natural and social sciences, and in the first. As must be expected, the results are highly satisfactory. In 1892, the first examination took place. See *Deutsche Arbeiter in Frage*, by M. Heyning, Paris."

[illegible]

Again, it appears to be certain, that the sense of consciousness existing medium resides in the *sabon* of the vessel immediately — that the flesh, the blood, and the milk — is conscious whether injected or taken away; and lastly, that the sense can be communicated through a wound or incision of the cuticle, and not otherwise — although, it is hardly possible that it may be received through the mucous membrane of the lips, eyes, or nostrils.

Whether the activity of the pineal corresponds with the life of the naked animal, is still a mooted point, and cannot be proved.







"The intervening time between the vaccination by the calf lot, and the appearance of the symptomatic disease, is very variable, and the duration of it, in the majority of instances, the effects appear in the dog lot seven the third and seventh week follow, but sometimes none and then occur, where they have more protracted course, four, or even a greater number of months. Although, however, nature does not lose sight of, even after eight weeks, the danger may be considered as immediately terminated. A week is the shortest period I have yet witnessed, the late and early appearance. Mr. Youatt does not seem aware with me that no certain intervening days I do believe, as far as my own experience goes, the average time of the same with the dog. Mr. Youatt, however, limits it to three to four months. It is still the prophylactic period within which the animal is in danger and cure. In the human it may appear in a month, or be protracted to three or four, and the late Mr. Henry Jones, authenticates a case within his own knowledge, in which the hydrophobic symptoms were delayed until a two-months after the bite. Of the extraordinary instances we read of, which have been protracted to five, twelve, and even nineteen years, I do not believe one.

### "SYMPTOMS OF RABIES.

"I shall now proceed to describe the *pathognomonic* and *accidental* indications of the mind *madly*, promising that the varieties in both, but particularly in the latter, are so numerous, that hardly any two cases present themselves under a directly similar aspect. It is, however, certain that, by the aid of the *pathognomonic* symptoms, the disease may be commonly detected without fear of mistake. The extent of the former, and the necessity for a distinct notice of all the varieties of the latter, render a peripatous account of the matter extremely difficult, and necessarily extend it beyond the limits of a summary.

"*Rabies canina* commences with delirium, at others with a



most common and useful form of the  $\chi^2$  test, namely, the  $\chi^2$  test for the goodness of fit of a theoretical distribution to a sample distribution, is given by

$$\chi^2 = \sum_{i=1}^n \frac{(O_i - E_i)^2}{E_i},$$

where  $O_i$  is the observed frequency of the  $i$ th class,  $E_i$  is the expected frequency of the  $i$ th class, and  $n$  is the number of classes.

In the case of the  $\chi^2$  test for the goodness of fit of a theoretical distribution to a sample distribution, the expected frequency of the  $i$ th class is given by

$$E_i = n p_i,$$

where  $n$  is the sample size, and  $p_i$  is the probability of the  $i$ th class. The expected frequency of the  $i$ th class is given by

$$E_i = n p_i = n \frac{1}{n} = 1.$$

Thus, the expected frequency of the  $i$ th class is given by  $E_i = 1$ . The expected frequency of the  $i$ th class is given by

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$$E_i = n p_i = n \frac{1}{n} = 1.$$



erose than you are less than I am, and, particularly, when the disease extends to the mind, thus, in old female madmen, they often present a full intellect, and a perfect understanding of the nature of their insanity, usually the more extensive the intellect. The ordinary disease, however, is attended by a total suspension of the understanding, and the patient is ignorant of his situation, with instances, therefore, of a prudent discharge from society and the hospital, and a return to the hospital. Much more, I feel sure, will be known, and a disposition to look on the madman as a creature, whose conduct is the effect of madness, and that the proper mode of treatment must consist in kindness and reasonable discipline, and a judicious use of sedatives in the paroxysms, the treatment of the great dependence on the general character of the insanity, however the treatment and our communications to the patient, must be directed to the illness frequently. A country madman will sometimes escape notice, but although the medical authorities may contravene, still confinement does not do much, and every treatment has its limits, and its propriety, the physician must still maintain the propriety of the treatment he has chosen, and within it, he should, this circumstance forms one of the most important of the existence of the disease, as will be hereafter decided.

A continual delirium or violent excitement of some part of the mind of the body, is by no means an uncommon symptom, and I have examined most of the patients frequently delirious, or the remains of the mind by which the person was recovered, and when the former would cure, was continued in the latter, if a true history of the case can be gained, it will be found that the intellectual was recovered from the paroxysm of delirium or febrile; for I have never known a patient who had been delirious, the lower part of the mind recovered, and the upper part appears by no means to have been delirious, and the patient is recovered, and the contrary has not only occurred, but I have seen, during the last century, a patient who had been delirious, but with such the mind was not so affected, but an disinclination to liquid exists, will be readily ascertained by



all who observe the disease with only common attention, from the fact that, when necessary to make a selection. We state this as a general fact, not of two instances in many, but doubts may occur of constipation, diarrhoea, indigestion, &c., have been refused, not so the many but made a point of observation, and one has been any needed attention to water. In the same way, liquids of all kinds are taken as usual, and some continue to use them, throughout the campaign, not only, from a few days and perhaps of the parts of day at once, nearly swallow them as the abandoned stomach, but, in some cases, swallow them by the attempt, not does the case put off from, on the contrary, from the third day on, by the symptoms of fever present, water is sought for, and, in most cases, extra measures are resorted to it. I have specimens of some of a variety, five years, many of which were passed at the height of its most frenzied visitations. I again repeat that not produce any other effects, *there is no sign of it, but it is not a sign of it, and it is not a sign of it, and it is not a sign of it.*

In the article of Mr. Hume's excellent account, in which a report from a number of reports from the same or a number of observations, and which is not dependent on the same point of all errors concerning cause, madmen, is at this point.

It is an undoubted fact, contrary to all received opinion, that the mad man has a sense of water whatsoever, consequently, the removal of water is no evidence of a delirious man, but, the greedy drinking of water, or planning water, any proof of his being free from madness!

"I see Hume, in *Madness*," he proceeds, "that is called, is that state of increased excitement and irritability, which begins to show itself immediately after the onset, and only with the early symptoms. Sometimes these paroxysms are passed over, unobserved, and it is therefore supposed that the mind is not so much attacked with the appearance of it. It is, however, very seldom that such is really the case, by which the danger from madness is much lessened. The patient is quiet and is distinguished by a general quickness of manner,



sudden startings, great watchfulness, and a disposition to be acted on by sudden images or noisy noises, the appearance of a stranger, &c. This watchfulness, however, often yields to a momentary stupor, and inclines on to sleep, in which the dog will start up, and fix his eyes steadily on some object, possibly on one not newly noticed, and often on one altogether imaginary, at which he will attempt to fly. In this stage the breathing is often hurried, sometimes the panting is excessive, and, where the pulse can be examined, it is invariably found rapid, and sometimes hard. The mutuality in these cases is marked by extreme impatience and irritability, and even when no apparent stimulus is yet offensiveness towards those around may appear, yet a violent disposition to resist any slight offence offered commonly denotes it. A stick held to such a dog is sure to excite his anger, even if in those he is most attached to, and he will surround it, use it with violence; the same will occur if either the hand or foot is held out, but, unless in a very great state of excitement, these he will rather nuzzle than bite, it being a game to him he is acquainted with. This disposition to become irritated on the slightest show of offence, as flying at a stick, is a very marked feature of rabies, and should be very particularly attended to, and the more, as it usually is present in both varieties of the morbid—unless when paralysis has blunted the capacity of excitement. A peculiar suspicion marks these particular cases, and a degree of timidity, whereby when in the midst of rages, apparently received with pleasure, the dog will at once turn and snap at those watching him; he will, perhaps, readily come when he is called, and with every mark of tractability, will wag his tail and seem pleased, but on a sudden he will seem to receive a sudden repression, and hastily bite the person who called him. This stage is often marked, in large and naturally fierce dogs, even the fearlessness of danger, and contempt of every manner, every restraint is submitted to with extreme reluctance, the miserable brute shakes his chain with extreme violence, and, when confined without one, he will attempt by every means to escape,



exists in the form of a single phase, but it is not a simple solid solution. It is a complex solid solution, in which the various components are distributed in a regular manner, but the distribution is not perfect. The distribution is such that the various components are distributed in a regular manner, but the distribution is not perfect. The distribution is such that the various components are distributed in a regular manner, but the distribution is not perfect.

[illegible]

The first of these is the fact that the majority of the population of the United States is now living in the urban areas. This is a result of the process of urbanization, which has been going on since the beginning of the nineteenth century. The second of these is the fact that the majority of the population of the United States is now living in the middle class. This is a result of the process of social mobility, which has been going on since the beginning of the nineteenth century. The third of these is the fact that the majority of the population of the United States is now living in the white middle class. This is a result of the process of racial segregation, which has been going on since the beginning of the nineteenth century.











symptoms spring from the specific laryngitis and bronchitis, by which these parts are limited even to paralysis, yet are entirely free from any of the hæmorrhagic disposition. It is, however, far otherwise with the extensive muscular tissues: the cutaneous muscles remain often free, although sometimes paralyzed over the face, and, at times, and the spasmic and paralytic affection frequently extends also to all the muscles of locomotion. In others, it is principally confined to the inner and hinder extremities. When the morbid affection is very strongly on the bowels, it occasions the hinder parts to be drawn forward by a species of tetanic spasm toward the fore parts, so as to bend the body of the patient into a circle; sometimes it fixes the animal on his rump, almost upright.

A symptomatic morbid, or dumb madness, and not a cerebral, morbid, and somewhat peculiar also, is a disposition to carry the tongue over matters, most in the mouth, which, the dog seems to take a dislike to, frequently altering it, putting it to piece, and some remarking it. It is also very common to observe dogs scratch their flanks under the mouth, these flanks fast, not as when making their beds, but evidently to press the feces of litter to the belly. This peculiarity appears to arise from some particular sympathy with the intestines, which, in those cases, are always after death observed to be very badly and used. There is also present a disposition to pick up and to swallow, when not prevented by the affection of the throat, such as to be and unnatural substances, selected from whatever is around them, and which the dogiveness usually present tends to bring within the body. It appears to be a compulsion, likewise, that leads rabid dogs to gnaw boards, or whatever is near, their reach, and this aptitude may be considered as common to every variety of the complaint, except, as already observed, when the functional and paralysis of the throat are so extensive as altogether to prevent it.

The *creakability* attendant on a dumb dog is even subject to more variation than that which the rabid dog is. It is sometimes complete, and exhibits all the treacherous and infectious disposition that marks the other, but when the dumb character







"What other assumptions are, by possibility, contemplated and solved?—The maintenance of the map of marks such as an inquiry necessarily, and it must be presented in, more below."

We now come to another especially worthy remark, of being capable of being rendered in the highest of successful, for the decision whether to permit the means, and if any, what, are required, for the death of the animal when any have inflicted a wound on any individual.

<sup>⑤</sup> 伊日里卡·阿列克谢耶维奇·瓦伊特列夫著《俄罗斯人》，北京：三联书店，1997年。

"The results of the study indicated that teachers most important to them in a principal's life are the majority, but is one that was

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is a  $\mathbb{C}^n$ -valued function on the space of all  $n$  by  $n$  Hermitian matrices. The function  $\mathcal{F}$  is called the *characteristic function* of the random matrix  $X$ . The characteristic function of a random matrix  $X$  is completely determined by the moments of  $X$ . The moments of  $X$  are defined as follows: Let  $\mathbf{t}$  be an  $n$  by  $n$  Hermitian matrix. Then the  $k$ th moment of  $X$  is the  $k$ th derivative of  $\mathcal{F}$  at  $\mathbf{t}$ , evaluated at  $\mathbf{t} = \mathbf{0}$ . The moments of  $X$  are completely determined by the moments of  $X$ . The moments of  $X$  are completely determined by the moments of  $X$ . The moments of  $X$  are completely determined by the moments of  $X$ .

It is not difficult to prove that an  $n$ -element set has  $2^n$  subsets. We can illustrate this with the set  $\{a, b, c\}$ . The subsets of  $\{a, b, c\}$  are  $\{\}$ ,  $\{a\}$ ,  $\{b\}$ ,  $\{c\}$ ,  $\{a, b\}$ ,  $\{a, c\}$ ,  $\{b, c\}$ , and  $\{a, b, c\}$ . There are 8 subsets in all.

The first step in the construction of the model is the selection of the variables to be included in the model. The selection of variables is based on the theoretical framework of the study and the empirical evidence available. The second step is the specification of the functional form of the model. The functional form is specified as a linear relationship between the dependent variable and the independent variables. The third step is the estimation of the model parameters. The parameters are estimated using the ordinary least squares (OLS) method. The fourth step is the testing of the model. The model is tested for the presence of heteroscedasticity, autocorrelation, and multicollinearity. The fifth step is the interpretation of the results. The results are interpreted in terms of the effect of the independent variables on the dependent variable.







However, our experiments were conducted by the first author, and the other authors did not participate in the design of the experiments, and therefore, the other authors were not responsible and do not share the responsibility for the results. The authors of this paper do not intend to publish the results of the experiments, and therefore, the other authors were not responsible and do not share the responsibility for the results. The authors of this paper do not intend to publish the results of the experiments, and therefore, the other authors were not responsible and do not share the responsibility for the results.

When the time came to present the results of the study, I found that the majority of the teachers had not only been able to complete the questionnaire but had also been able to identify the various factors which had influenced their teaching practices. This was a very encouraging finding, especially since the teachers had not been given any specific instructions as to how to complete the questionnaire. I was, therefore, convinced that the majority of the participants were not only able to identify the various factors which had influenced their teaching practices but were also able to identify the various factors which had influenced their teaching practices. I was, therefore, convinced that the majority of the participants were not only able to identify the various factors which had influenced their teaching practices but were also able to identify the various factors which had influenced their teaching practices.



found, they invariably consist of a dark-colored liquor, not unlike coffee grounds.

"The *urætic acid* is often found with strong marks of disease also, but the frequency of these is not equal to that in marbled affection.

"The *urætic acid* is not found generally in the *urætic acid* when has come putrid, but there is a peculiarity of smell attending them, which is not to be mistaken, as I have often witnessed. There is also a kind of effluvia which particularly often is found produced by *urætic acid* in the *urætic acid* offered to a healthy person, as a part of the *urætic acid* is not found, but I found very often in the *urætic acid* of the *urætic acid* of the *urætic acid*, I am, therefore, inclined to think that the *urætic acid* is not in the small quantity of *urætic acid* as to the other, as has been in the *urætic acid* of the *urætic acid* of the *urætic acid* held forth."

After this Mr. Blaine proceeds to that of—

#### "THE MEDICAL TREATMENT OF RABIES."

"The *medical treatment* of rabies in the dog has hitherto proved invariably unsuccessful, neither has it been found otherwise in any other animal; while the few successful cases on record are a terrible result from any means tried, the human hydrophobia have a trail of disaster thrown over them that dampen our confidence, and leaves us to hope only that time may yet afford us a remedy for this dreadful scourge. The extent to which this scourge has already been carried, will present a circumstantial detail of the various medicinal agents which have been tried as curative of rabies."

Those, which Mr. Blaine enumerates, pointing out completely in what regards they have failed beginning with *cold and sea-bathing*, drugs, narcotics, &c. I shall skip entirely, and proceed at once to the *directly preventive treatment*.

The only internal remedy, of which it is worth while to make any mention, is a draught of which Mr. Blaine gives the follow-







Chop these finely, and, after running them in a pint of water (1 lb. a pint) strain and press out the liquor. Boil both in a tincture, or otherwise, to make them thoroughly, and lend them again in a pint of water, till half a pint, which pour out &c. repeat. And, thus, mix with the same liquor, which we make use of for our use, as before. If double this quantity will seem too little, you may have more. *Do not extend it too much, but have it all in a pint, or less, as you see fit of the quantity required.* It is to be used in the same manner, and continued for a small time. That time does not seem to be arbitrary, but is to be directed to the nature of the disease. Both human and brute diseases are cured in the same manner, according to the proportions specified."

It may seem to some, that we have repeated yourself, and that you are in a double labour, and that any other medicine would do the particular request of the patients; and that in all the cases it proved successful.

I answer, however, because, when medicines are every person, let us, to say, cannot not use, or this. I shall now conclude my observations on this subject, by the directions which have in relation to the extirpation of the virus by means of the knife, or the actual cautery, or cauter, which is the only practice on which dependence can be placed.

His remarks on the cure of the venereal disease I shall not only pass over, for greatly I deplore the wholesale and wholesale witchery of these viruses, and so many respects admirable cures, as it is usually perpetrated without concern the virtue of our great cities still more do I deplore the spreading of a long, often by one expected, of madness.

Every dog owner should remember that, if he knowingly permits a dog taken by another on good grounds suspected of madness, and that if death ensue to a fellow-being, from his guilty neglect, whether known how injured him innocent or no, there is much cause to believe that *He*, without whose knowledge, it is said, that not a sparrow falls from heaven, will require at his hands the blood of his brother.







animal, I was next advised to ask about the wounded owner or attendant. If either is a wild dog, first, when the case was submitted to any other surgeon, my attendance was likewise required: by whom however I have seen, comparatively, nearly as much of humours as of these patients, and especially the treatment of ulcers. I have missed operations composed of fifty persons, who had been in, put together, often over and done, and on a few better cases, the only ones of whom did well: which statements I make purely to inform, depending on the practical truths which I have perceived, and on those directions which are to follow.

Although the removal of the rotten part may be undertaken at any time, soon after the attack, yet it is not always uncertain at what time the necessary inflammation may take place, so it is prudent to postpone the operation, as waiting, in some cases, is necessary, but it is frequently a matter of great importance to the peace of those unfortunately wounded to know, that, when any accident has delayed the operation, it may be as safely done at the end of several days, as at the first moment of the accident. I have myself repeatedly removed the rotten parts many days, and rest nearly perfectly well, even after the original wound had been perfectly closed up: yet the operation has always proved perfectly successful. On the methods resorted to for the excision of the rotten part, the several *curiosos*, the *not afraid surgery*, and *curiosos*, are employed, and have each of them their advocates.

The *curios* *curios* was employed by the ancients, who burned the parts with heated iron, sometimes with brass, silver, or gold. Some of the moderns have resorted to the same, and as it is a remedy immediately at hand, it is not an unreasonable one, particularly where the means of removal of other more quackish, more complicated, and more dangerous, and also where other assistance is not at hand. When, however, the wound is of considerable size, and deep, and in extent, the actual cautery is a ready and convenient method, particularly with regard to horses, cows, and other large animals, who are



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freely applicable to all surgical operations, particularly with the lancet, it supports its use in a particular line or fast fastened to a particular part of the body, as, for instance, the surface of the wound being then covered over with it. As its action becomes immediately lost after a few applications, confined to the point of application only, it is evident that it is more useful in superficial lacerations, excoriations, and wounds of excoriation, to the same extent it is useful than the powdered nitrate of silver. Potassium permanganate, also used as escharotic, is more powerful, and increased proportionally, as the extent of the laceration or excoriation increases, in use and then also employed in this way.

*Potassium permanganate*, being oxidized by, is not carrying the deffinition of a particular mode of formation of the eschar, produced by the decomposition, from outside agent, but this form can be used in a variety of ways. In the nitrate of silver is formed mass of point and considerable friction to keep up by it over the wound, the decomposed portions are removed by the running, and the escharization goes on to any depth or extent required. In penetrating wound, made by the canine teeth, the probe is used to detect the course of the wound, the knife may be properly employed to dilate it, and render it accessible to the approach of the cautery, in which case rapid certainty is gained by cauterizing by the other, with some loss of substance. It has also been employed by caustics, but they may dilate the wound, and may stagnate within the wound, but, if previous active dilution of the wound has taken place, it may be applied that no virus but that involved within the tissue will remain. It is truly said, that cautery cannot be so conveniently applied to the bottom of a deep wound—but as time comes the knife can be first employed in dissecting out the infected cavity, with all its parts. A much more imaginary objection has been urged to the use of caustics, particularly to those formed of the caustic alcohols, which is, that in their action they waste themselves with the morbid solids, and, with the decomposed animal matter, form together a suppurative mass of eschar, which may retain



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the Towards animals, particularly of the cat and dog kinds, a considerable aversion exists, and would tend to multiply the best method of parts treated by so much correspondence, even so, may be considered preferable. In the management of large bloodsuckers, ticks, &c., it is evident that the best method is used, and by firm pressure, between the parts, may be apparently with the intention, as it is clear, which shuts up parts of the parts underneath, and causes them to penetrate themselves, previously to a rupture, and they should be carefully inspected. The cure is given, and continued, by removing the skin, and detaching it, more or less, to any depth, and to any extent, with the certainty of destroying the virus as it proceeds.

The blood vessel, if it is, or even, is very apt to obstruct a proper and clear view of the extent of the injury, and a corresponding view, which I have frequently witnessed among surgeons, in operations on the human subject, which is the removal of a much larger quantity of surface than is actually necessary. With the caution, nothing of this kind happens, proceeding deliberately, every portion of a combined surface is seen in succession, until the whole insulated part is destroyed, but no more.

*Process of operation for the Animal bite.*—When a dog, or any other animal, has been attacked by one that is rabid, it is evident that a difficulty presents itself which does not exist in the human subject under similar circumstances. The incapacity of the wounded animal to point out the wounds that may have been received, and which the hair may prevent from being observed, renders it necessary that a very minute examination of every part of the body should take place, by turning the whole hair deliberately back; after which, to remove any rabid saliva that may adhere to the hair in other parts, the animal should be washed all over, first with simple warm water, and, next, with water in which a sufficient quantity of either potash or soda is dissolved, to render it a moderate lye, in doing which the eyes must be carefully guarded. Having finished this operation, which will render the dog or other animal secure from accident,



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 243. *Author Contributions*  
 244. *Patents*  
 245. *Data Availability Statement*

to treat the condition

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finish this important subject by offering a few remarks, culled later, I would hope, to the remarks of many individuals on some not final points of fact, in apt to be seen, and I sincerely sorry already, and much to be deplored. I would first notice, that, as a very distorted view of *typhoid* occurred by association with him, the day of our commonated friend, gallant protector, and useful servant, a more distorted view presented altogether. Many of those who are *typhoid* mainly attracted to the time, yet does not change in the pleasure of his company, from a daily instance, as it is, concluded on a supposition that he can be *typhoid* from a variety of other circumstances, because the loss of motion affected does. I could not to assure those who think thus, that *typhoid* is entirely in error, something, but a successful case of it can produce it, not, out of the ordinary *typhoid* disease, those, third, possibly, become mild, even when *typhoid* disease, in his case made, thus, there is little to be confirmed or confirmed. The disease never makes its *typhoid* appearance with my mischievous tendency, more so little danger is there from the early stage of the complaint, that I should entertain no fear whatever were I confined, day after day and night in the same room with half a dozen more, all daily associated with a *typhoid* virus. The slightest degree of attention will always detect some peculiarity in the affected *typhoid* case, none, some departure from his usual habits; and thus may be observed, one day, at least, commonly two days, before the *typhoid* symptoms commence, or before any mischievous lesions be shown, and which, at the worst, is not often perceived towards those there are interested in, if not meddled with. I have given a number of the cases that occur, no more however, I perceive that all appears towards *typhoid* persons through the whole complaint, except it be called forth by opposition and violence; which consideration tends to reduce danger still, more in the city. I ought to mention, in no small degree, to lessen the dread of fear of *typhoid*, even when the worst has been proved, and *typhoid* process, has been unfortunately taken by a *typhoid* accident, that a *typhoid* made, a *typhoid* seems to me to be still at hand, the appearance of *typhoid* is attended with the most







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**NOTE**

It is a well-known experimental fact (see, e.g., [1, 2]) that, in the case of a small number of particles, the results of the measurements are not reproducible. This is due to the fact that the results of the measurements are sensitive to the initial conditions of the system.

[illegible][illegible]

I trust that the members of the jury will be satisfied with the evidence. Mr. Hinton is a well-known, successful, and reliable business man. With Turkey, the public accountants of the corporation, I am permitted to disagree from that in his unvalued exhibit.

September 16, 1994















